



# ORANGE COUNTY FIRE AUTHORITY AGENDA

## Human Resources Committee Meeting

Tuesday, November 6, 2018

12:00 Noon

### Orange County Fire Authority Regional Fire Operations and Training Center

1 Fire Authority Road

Room AE117

Irvine, California 92602

Al Murray, Chair

Rob Johnson, Vice Chair

Laurie Davies Gene Hernandez Noel Hatch Vince Rossini Dave Shawver

This Agenda contains a brief general description of each item to be considered. Except as otherwise provided by law, no action or discussion shall be taken on any item not appearing on the following Agenda. Unless legally privileged, all supporting documents, including staff reports, and any writings or documents provided to a majority of the Human Resources Committee after the posting of this agenda are available for review at the Orange County Fire Authority Regional Fire Operations & Training Center, 1 Fire Authority Road, Irvine, CA 92602 or you may contact Sherry A.F. Wentz, Clerk of the Authority, at (714) 573-6040 Monday through Thursday, and every other Friday from 8 a.m. to 5 p.m. and available online at <http://www.ocfa.org>

If you wish to speak before the Human Resources Committee, please complete a Speaker Form identifying which item(s) you wish to address. Please return the completed form to the Clerk of the Authority. Speaker Forms are available on the counter noted in the meeting room.



In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, you should contact the Clerk of the Authority at (714) 573-6040. Notification 48 hours prior to the meeting will enable the Authority to make reasonable arrangements to assure accessibility to the meeting.

## CALL TO ORDER

PLEDGE OF ALLEGIANCE by Director Hatch

## ROLL CALL

## PUBLIC COMMENTS

Any member of the public may address the Committee on items within the Committee's subject matter jurisdiction but which are not listed on this agenda during PUBLIC COMMENTS. However, no action may be taken on matters that are not part of the posted agenda. We request comments made on the agenda be made at the time the item is considered and that comments be limited to three minutes per person. Please address your comments to the Committee as a whole, and do not engage in dialogue with individual Committee Members, Authority staff, or members of the audience.

**1. PRESENTATIONS****A. Behavioral Health**

Presented by: Jonathan Wilby, Human Resources Risk Manager

Recommended Action:

Receive and file.

**B. Cancer Prevention**

Presented by: Jonathan Wilby, Human Resources Risk Manager

Recommended Action:

Receive and file.

**2. MINUTES****A. Minutes from the September 4, 2018, Human Resources Committee Special Meeting**

Submitted by: Sherry Wentz, Clerk of the Authority

Recommended Action:

Approve as submitted.

**3. CONSENT CALENDAR****A. Contract Award for Classification and Compensation Study Services**

Submitted by: Brigitte Gibb, Human Resources Director

Recommended Action:

Receive and file the report.

**4. DISCUSSION CALENDAR****A. Annual Workers Compensation Program Update**

Submitted by: Brigitte Gibb, Human Resources Director

Recommended Action:

Receive and file the report.

**B. FY 2017/18 Human Resources Accomplishments**

Submitted by: Brigitte Gibb, Human Resources Director

Recommended Action:

Receive and file the report.

**REPORTS**

- Class and Compensation Study Award

**COMMENTS**

**HUMAN RESOURCES DIRECTOR’S COMMENTS**

**COMMITTEE MEMBER COMMENTS**

**CLOSED SESSION**

**CS1. CONFERENCE WITH LEGAL COUNSEL–ANTICIPATED LITIGATION**

Authority: Government Code Section 54956.9(b) – Significant Exposure to Litigation  
(32 cases)

**CLOSED SESSION REPORT**

**ADJOURNMENT** – The next regular meeting of the Human Resources Committee will be Tuesday, February 5, 2019, at 12 noon.

**AFFIDAVIT OF POSTING**

I hereby certify under penalty of perjury under the laws of the State of California, that the foregoing Agenda was posted in the lobby, front gate public display case, and website of the Orange County Fire Authority, Regional Fire Training and Operations Center, 1 Fire Authority Road, Irvine, CA, not less than 72 hours prior to the meeting. Dated this 1<sup>st</sup> day of November, 2018.

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Sherry A.F. Wentz, CMC  
Clerk of the Authority

**UPCOMING MEETINGS:**

Budget and Finance Committee Meeting	Wednesday, November 14, 2018, 12:00 noon
Claims Settlement Committee Meeting	Thursday, November 15, 2018, 5:00 p.m.
Executive Committee Meeting	Thursday, November 15, 2018, 5:30 p.m.
Board of Directors Meeting	Thursday, November 15, 2018, 6:00 p.m.

# **Behavioral Health Program Update**

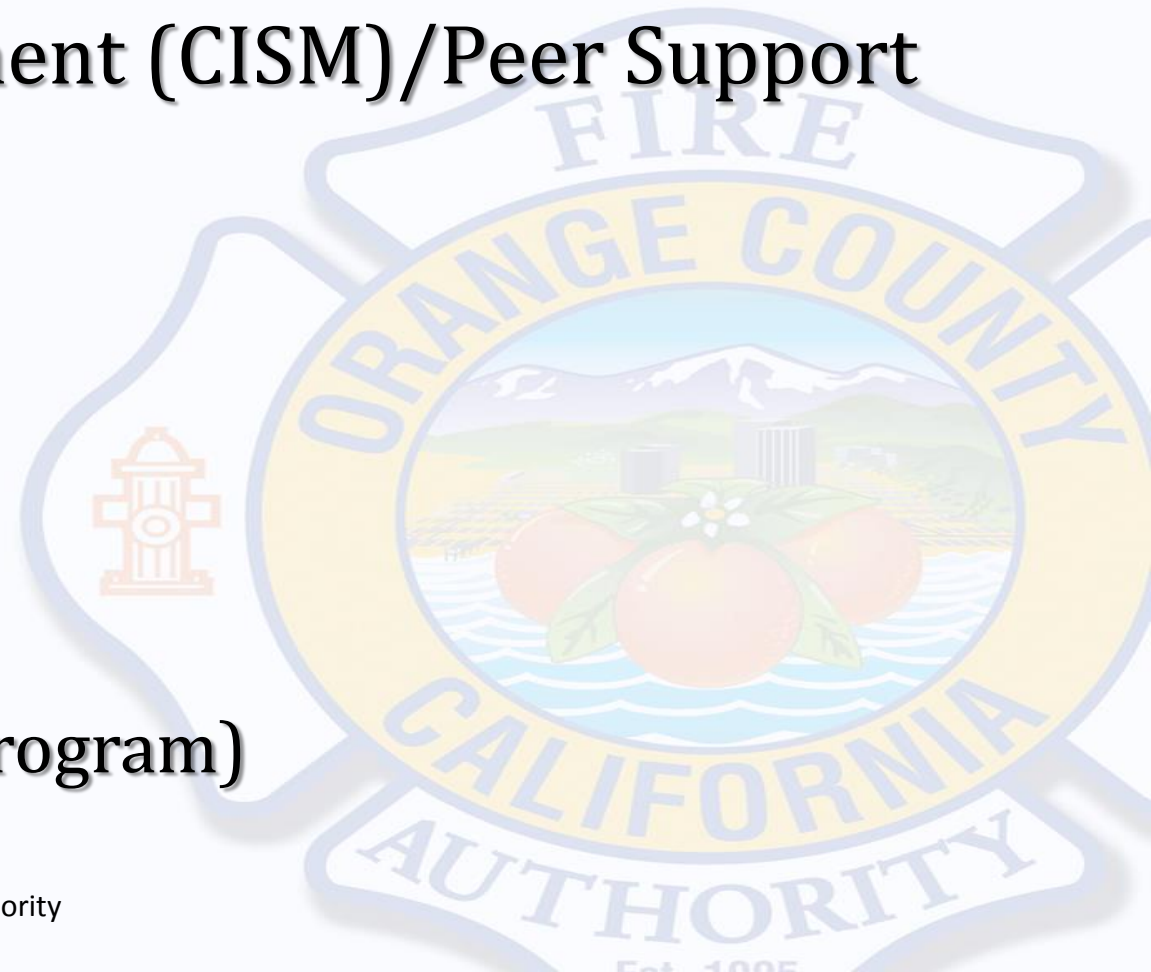
Human Resources Committee

November 6, 2018



# Behavioral Health Program - Past

- Employee Assistance Program
- Critical Incident Stress Management (CISM)/Peer Support Team
  - 15 employees serving both roles
- Chaplains Program
- Benevolent Association
- Academy Training
  - 30 minutes (CISM and Chaplains Program)



# Behavioral Health Program - Present

- Behavioral health and wellness services – TCTI
- Peer Support Team
  - 50 team members
  - 15 being trained in November
- CISM Team
  - 13 team members
  - 7 being trained in November
  - CISM Duty Chief designated on each shift
- Training/Awareness
  - Podcasts
  - Video newsletter segments
  - Chief Officer Academy – 2 hours
  - Captains Academy – 2 hours
  - Firefighter Academy – 4 hours
  - Dispatcher Academy – 2 hours
  - All personnel – 3 hours by June 2019



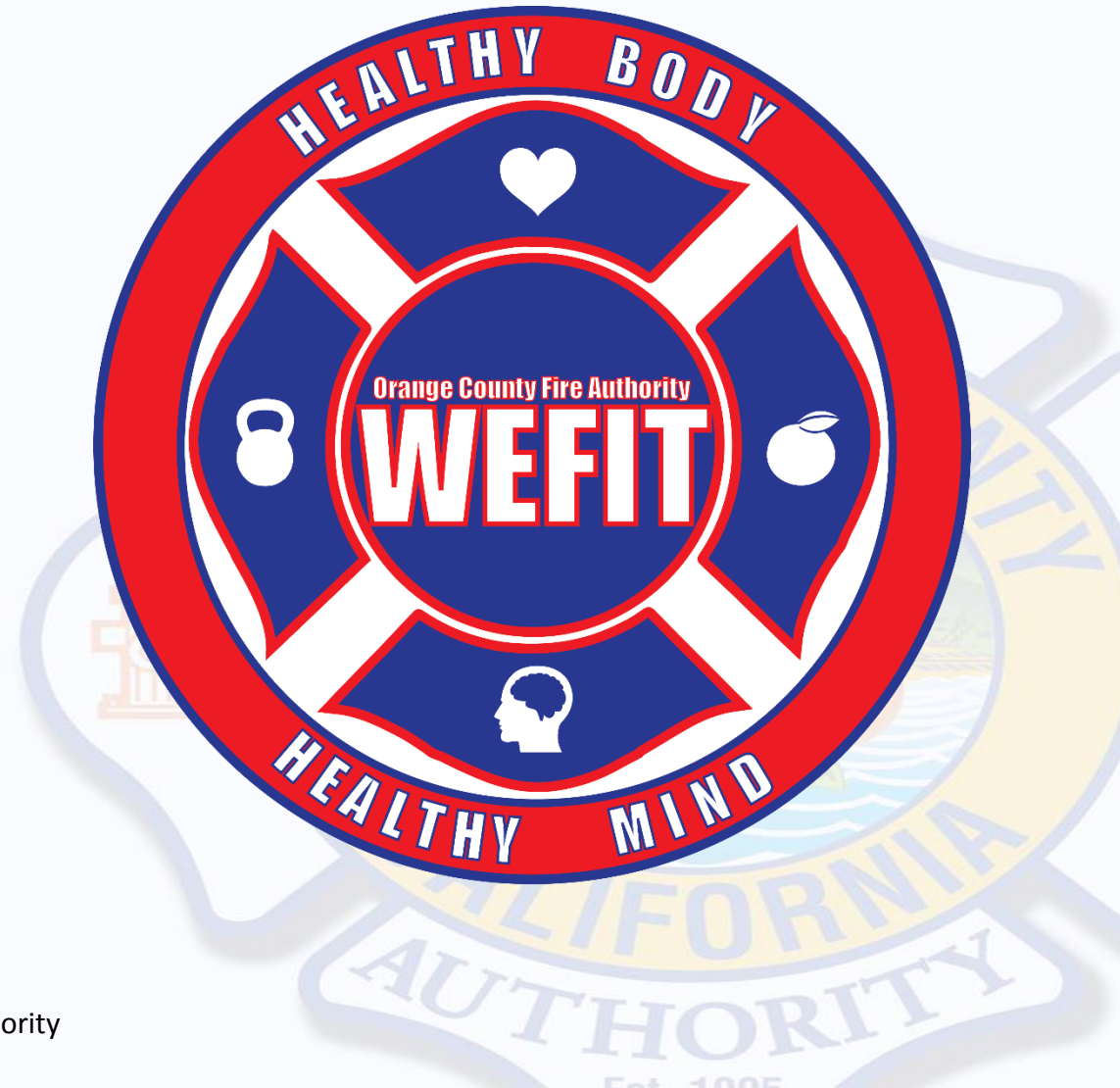
# Behavioral Health Program - Present

- Significant Other Survival Course
  - Scheduled quarterly
  - Postcard invitations sent to the employee's home
  - Two classes (57 attendees)
- Behavioral Health Conference
  - OCFA Behavioral Health Conference
  - Public Safety Peer Support Association



# Behavioral Health Program - Future

- Normalize the CISM process
- Organize peer support team into specialty areas
- Utilize peer support team members to support employees on workers' compensation
- Vet network of culturally competent behavioral health resources
- Increase retiree awareness of the services available
- Continue the branding of this program under the WEFIT Program





# Behavioral Health Program

**Questions?**



# **Cancer Awareness Prevention Program Update**

Human Resources Committee

November 6, 2018



# Cancer Awareness Prevention Program - Past

- Respiratory Protection Program
- Turnout Loaner Program



# Cancer Awareness Prevention Program - Present

- Equipment
  - Second set of turnouts
  - Sunscreen dispensers
  - Decontamination wipes
- Policies & Procedures
  - Selection, care, and maintenance of protective ensembles for structural and proximity firefighting
  - Respiratory protection program
  - Vehicle exhaust collection system
  - Skin cancer evaluation added to WEFIT medical examination
- Training/Awareness
  - All Battalions (86 training sessions)
  - Chief Officers Academy, Captains Academy, Engineers Academy and Firefighter Academy
  - Vehicle exhaust extraction system use training video
  - Gross field decontamination training video
  - Multiple podcasts and video newsletter segments
  - 10 outside agencies or conferences
  - Firefighters Attacking the Cancer Epidemic (FACE) team
  - Ice machine testing



# Cancer Awareness Prevention Program - Present

- Program Branding



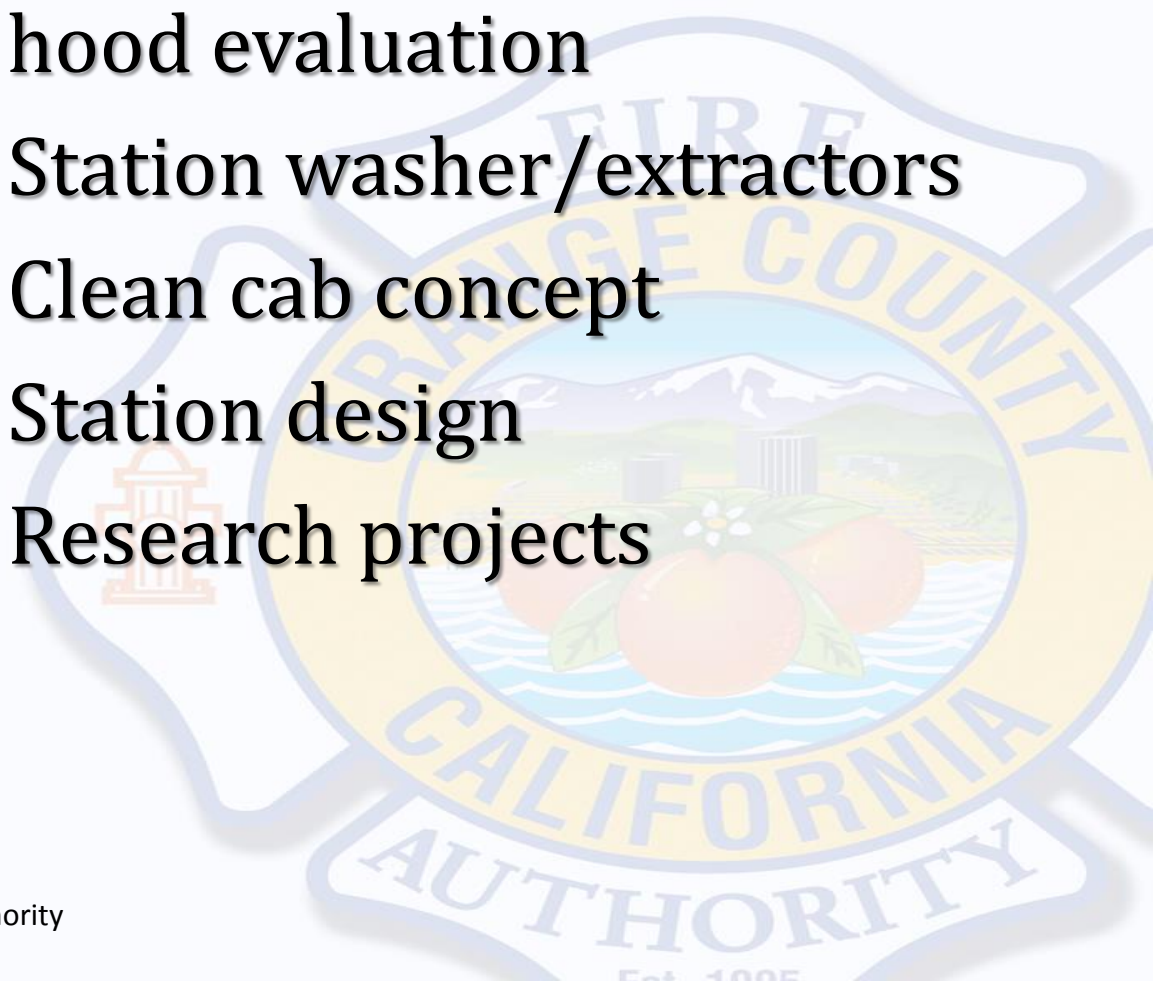
- Strategically Placed Branding





# Cancer Awareness Prevention Program - Future

- Develop gross decontamination policy
- Retrofit vehicle exhaust extraction systems
- Post-fire asbestos sampling procedure
- Intranet site development
- Flash hood exchange program
- Particulate blocking flash hood evaluation
- Station washer/extractors
- Clean cab concept
- Station design
- Research projects



# Cancer Awareness Prevention Program

**Questions?**



# MINUTES ORANGE COUNTY FIRE AUTHORITY

**Human Resources Committee Special Meeting**  
**Tuesday, September 4, 2018**  
**12:00 Noon**

**Regional Fire Operations and Training Center**  
**Room AE117**  
1 Fire Authority Road  
Irvine, CA 92602

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## **CALL TO ORDER**

A special meeting of the Human Resources Committee was called to order on September 4, 2018, at 12:02 p.m. by Chair Murray.

## **PLEDGE OF ALLEGIANCE**

Director Rossini led the assembly in the Pledge of Allegiance to our Flag.

## **ROLL CALL**

**Present:** Laurie Davies, Laguna Niguel  
Noel Hatch, Laguna Woods  
Rob Johnson, Cypress  
David Shawver, Stanton  
Al Murray, Tustin  
Gene Hernandez, Yorba Linda  
Vince Rossini, Villa Park

**Absent:** None

## **Also present were:**

Fire Chief Fennessy  
Assistant Chief Randy Black  
Deputy Chief Dave Anderson  
Legal Counsel Barbara Raileanu

Assistant Chief Mark Sanchez  
Deputy Chief Lori Zeller  
Human Resources Director Brigette Gibb  
Assistant Clerk of the Authority Martha Halvorson

## **PUBLIC COMMENTS (F: 12.02D3)**

Chair Murray opened the Public Comments portion of the meeting. Chair Murray closed the Public Comments portion of the meeting without any comments from the public.

### **1. PRESENTATIONS**

#### **A. Recruiting (F: 12.02D6)**

Human Resources Manager Tia Grasso presented a PowerPoint presentation on Human Resources Recruitment & Selection Update.

Director Hatch arrived at this point (12:07 p.m.).

The Committee received the presentation.

#### **B. Promotional Process (F: 17.10J5)**

Human Resources Manager Tia Grasso introduced Battalion Chief Mike Summers who provided an update on the Promotional Process.

The Committee received the presentation.

#### **C. Update on Girl's Empowerment Camp (F: 17.11D)**

Human Resources Manager Tia Grasso presented a PowerPoint presentation and update on the Girl's Empowerment Camp.

The Committee received the presentation.

### **2. MINUTES**

#### **A. Minutes from the Human Resources Committee July 10, 2018, Special Meeting (F: 12.02D2)**

On motion of Director Shawver and second by Director Hernandez, the Human Resources Committee voted unanimously by those present to approve the Minutes of the July 10, 2018, Special Human Resources Committee meeting as submitted.

### **3. CONSENT CALENDAR**

No Items.

#### **4. DISCUSSION CALENDAR**

##### **A. Division Chief Selection Process (F: 17.10J5)**

Deputy Chief Lori Zeller provided an overview on the Division Chief Selection Process.

On motion of Chair Murray and second by Director Rossini, the Human Resources Committee voted unanimously by those present to direct staff to place the item on the agenda for the Board of Directors meeting of September 27, 2018, with the Human Resources Committee's recommendation that the Board of Directors approve the policy as recommended.

##### **HUMAN RESOURCES DIRECTOR'S COMMENTS (F: 12.02D6)**

Human Resources Director Brigette Gibb provided an update on the Investigations Policy and Lexipol contract that was approved at the Executive Committee meeting of August 23, 2018.

##### **COMMITTEE MEMBER COMMENTS (F: 12.02D4)**

Vice Chair Johnson commended staff for a job well done on today's meeting presentations.

##### **CLOSED SESSION (F: 12.02D5)**

General Counsel Barbara Raileanu reported the Human Resources Committee would be convening to Closed Session to consider the matter on Agenda identified as CS1, Conference with Legal Counsel-Anticipated Litigation.

**CS1. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION**  
Authority: Government code section 54956.9(b) – Significant Exposure to Litigation (50 cases)

Chair Murray recessed the meeting to Closed Session at 12:27 p.m.

Chair Murray reconvened the meeting from Closed Session at 1:48 p.m., with all members present.

##### **CLOSED SESSION REPORT (F: 12.02D5)**

Legal Counsel Barbara Raileanu stated there were no reportable actions.

**ADJOURNMENT** – Chair Murray adjourned the meeting at 1:49 p.m. The next regular meeting of the Human Resources Committee will be November 6, 2018, at 12:00 noon.

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Martha Halvorson, CMC  
Assistant Clerk of the Authority





Orange County Fire Authority  
**AGENDA STAFF REPORT**

Human Resources Committee Meeting  
November 6, 2018

Agenda Item No. 3A  
Consent Calendar

**Contract Award for Classification and Compensation Study Services**

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**Contact(s) for Further Information**

Brigette Gibb, Director [brigettegibb@ocfa.org](mailto:brigettegibb@ocfa.org) 714.573.6353  
Human Resources (HR)

Tamaryn Boston, Manager, [tamarynboston@ocfa.org](mailto:tamarynboston@ocfa.org) 714.573.6018  
Human Resources (HR)

**Summary**

This staff report is submitted for review to award contracts for classification and compensation study services to the three respondents in the Request for Proposal (RFP) process.

**Prior Board/Committee Action**

Not Applicable.

**RECOMMENDED ACTION(S)**

Receive and file the report.

**Impact to Cities/County**

Not Applicable.

**Fiscal Impact**

Funding of \$70,000 is included in the FY 2018/19 General Fund.

**Background**

On July 10, 2018, RFP SK2301 was issued to solicit competitive proposals from classification and compensation study providers. Final proposals were due on August 7, 2018, and CPS HR Consulting, Ralph Andersen & Associates, and Koff & Associates, Inc. submitted proposals. An evaluation team consisting of staff from Human Resources and office of the Clerk of the Authority evaluated the written proposals. Based on the evaluation scoring, the three respondents were selected to further negotiate the terms of the final contract.

**Recommendation for Award**

After the final scoring, it was determined that establishing multiple contracts with the three respondents would provide the best option for OCFA. This will provide the department with flexibility to utilize the firm with immediate resources to perform the requested services.

**Attachment(s)**

Proposal Evaluation Scoring for SK2301 – Classification and Compensation Study Services

**SK2301 – Classification and Compensation Study Services  
Summary of Evaluation Scores and Pricing**

***Evaluation***

An evaluation panel consisting of two Human Resources staff and one staff member from the office of the Clerk of the Authority evaluated the proposals received. The proposals were evaluated based on the criteria and point structure as defined in the RFP: statement of qualifications and experience (25), project approach/scope of work (30) and references (10), overall responsiveness (5) and proposed costs (30). Upon completion of the proposal evaluation, the panel determined that all proposals met the minimum mandatory requirements and would be able to provide the requested services. It was determined to be in the best interest of OCFA to award contracts to all three firms to allow flexibility in scheduling studies. Final evaluation scores are shown in the table below:

<b>Evaluation Score Summary</b>									
<b>Offerors</b>	<b>CPS HR Consulting</b>			<b>Koff &amp; Associates</b>			<b>Ralph Anderson &amp; Associates</b>		
<b>Average Hourly Rate*</b>	<b>\$126.67</b>			<b>\$174.00</b>			<b>\$135.00</b>		
<b>Evaluators</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>3</b>
Statement of Qualifications & Experience (25)	22.50	22.50	20.00	22.50	25.00	17.50	17.50	17.50	15.00
Project Approach / Scope of Work (30)	24.00	27.00	24.00	27.00	30.00	19.50	21.00	24.00	21.00
References (10)	7.00	6.00	8.00	7.50	10.00	7.00	7.00	8.00	7.00
Overall Responsiveness (5)	4.25	4.00	4.00	4.25	5.00	3.50	3.75	4.50	3.50
Proposed Costs (30)	30.00	30.00	30.00	21.84	21.84	21.84	28.15	28.15	28.15
Sum of Proposal Scores	87.75	89.50	86.00	83.09	91.84	69.34	77.40	82.15	74.65
<b>Ranking</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>
Sum of Rankings	4			6			8		
<b>Overall Rank</b>	<b>1</b>			<b>2</b>			<b>3</b>		

*\*Average Hourly Rate was calculated using the average of the hourly rates for the Project Manager/Project Director for the initial three year contract term. This was done so as to capture the increase in rates provided by CPS HR Consulting for years two and three of the initial contract term.*



Orange County Fire Authority  
**AGENDA STAFF REPORT**

Human Resource Committee Meeting  
November 6, 2018

Agenda Item No. 4A  
Discussion Calendar

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**Annual Workers' Compensation Program Update**

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**Contact(s) for Further Information**

Brigitte Gibb, Director Human Resources	<a href="mailto:Brigittegibb@ocfa.org">Brigittegibb@ocfa.org</a>	714.573.6018
Jonathan Wilby, Risk Manager	<a href="mailto:Jonathanwilby@ocfa.org">Jonathanwilby@ocfa.org</a>	714.573.6832

**Summary**

This annual agenda item provides an update on the workers' compensation self-insured program and the performance of CorVel Corporation, the third-party administrator, since June 1, 2014.

**Prior Board/Committee Action**

Not Applicable.

**RECOMMENDED ACTION(S)**

Receive and file the report.

**Impact to Cities/County**

Not Applicable.

**Fiscal Impact**

Not Applicable.

**Background**

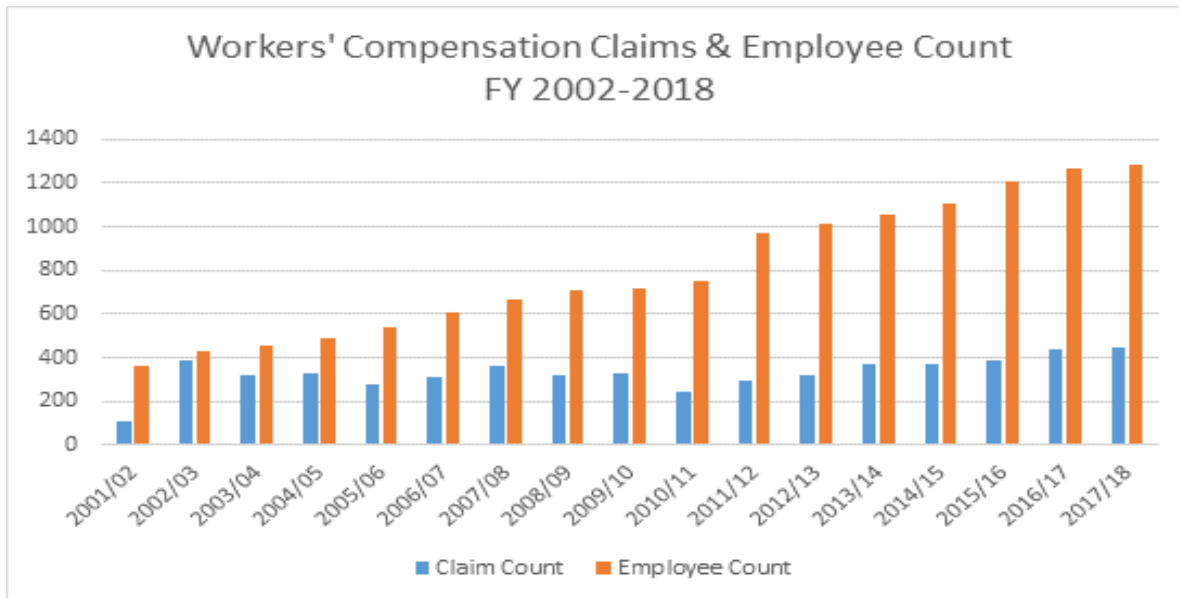
The Orange County Fire Authority (OCFA) was approved by the Division of Industrial Relations Self-Insurance Plans in 2002, to have a self-insured workers' compensation program which is administered through a Third-Party Administrator (TPA). The TPA for the OCFA self-insured workers' compensation program has been CorVel Corporation, since June 1, 2014.

***Budgeting for Self-Insurance Fund***

An independent actuary is used twice a year to project future workers' compensation costs and to update the amount of funding required to self-insure the OCFA workers' compensation program. The projection of costs and necessary funding are determined following an analysis of claims data dating back to the beginning of the self-insured program. Claims data includes case reserves set by the TPA, historical loss experience, and industry trends. The OCFA currently has 942 open claims dating back to the inception of the self-insured workers' compensation program.

Claim Category	2016	2017	2018	Percent Change
Death	5	6	6	0.0%
Indemnity	589	641	535	-16.5%
Maintenance	92	169	342	102.4%
Medical Only	39	50	59	18.0%
<b>Grand Total</b>	<b>725</b>	<b>866</b>	<b>942</b>	<b>8.8%</b>

Over the past year, the OCFA averages approximately 37 claims a month or 447 claims during the year (not including first aid injuries).



It's important to note that the 447 claims in 2018 represent all claims that were filed. Thirty of these claims were denied where the OCFA expects to have no liability. There were 253 indemnity claims resulting in days away from work, 163 medical only claims that have a life expectancy of 30- to 90-days, and 1 death claim. To date, 227 of the 447 claims resulted in claims costs less than \$5,000 per claim.

See the attached extended background that provides additional comprehensive details and explanation of the programmatic enhancements and savings.

**Attachment(s)**

Actuarial Analysis with data valued as of June 30, 2018

## **Background**

### ***Analysis of Actuary Projections Based on Claims Data as of June 30, 2018***

The OCFA policy is to fund the Workers' Compensation Program at the 50% confidence level for outstanding losses which includes medical payments, indemnity payments, allocated and unallocated expenses. The actuarial projection for long-term liabilities at the 50% confidence level is \$77,393,501 which is an increase of \$11,465,349 or 17.4% from the long-term liabilities identified in the December 31, 2016, actuary report.

The actuary has projected the liabilities to be incurred in FY 2018/19 to be \$17,866,354 which is an increase of \$4,179,098 or 30.5% from the projected liabilities identified for FY 2017/18 identified in the December 31, 2016, actuary report.

The increase in cost associated with the actuarial study reflects all outstanding paid claims to include reserves and incurred, but not reported claims, in addition to the statutory benefits up to the OCFA self-insured retention level of \$2.0M.

The actuary noted the increase in projected ultimate losses is attributed to increases in payroll, open claims count, and claim severity.

### ***Workers' Compensation Program Overview***

Risk Management conducted a major overhaul of the self-insured Workers' Compensation Program in 2014. We continue to evaluate and monitor the program for services that will provide benefits that will "cure and relieve the effects of the injury" while improving program results. The current program features include an Alternative Dispute Resolution Program, occupational clinics, medical provider network, utilization review, nurse advocacy, and Pharmacy Benefits Management Program.

The OCFA currently has 942 open workers' compensation claims being administered by the third-party administrator (TPA) ranging from indemnity (loss time), medical only, and future medical cases. The OCFA has experienced an 8.8% increase in open claims from 866 to 942 during this reporting period, which impacts our long-term liabilities.

<b>Open Claims</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>Percent Change</b>
Death	5	6	6	0.0%
Indemnity	589	641	535	-16.5%
Maintenance	92	169	342	102.4%
Medical Only	39	50	59	18.0%
<b>Grand Total</b>	<b>725</b>	<b>866</b>	<b>942</b>	<b>8.8%</b>

Table 1: Summary of Open Claims

### ***Medical Provider Network (MPN)***

The OCFA implemented a MPN on July 1, 2014, which has provided employees with access to physicians that specialize in workers' compensation care and a 24/7 nurse advocacy program. OCFA employees have experienced reduced delays in medical treatment and faster return to work due to the doctors' familiarity with the regulatory requirements. The OCFA experienced several claims that had a significant fiscal impact to our program in FY 2017/18 that included major



hospitalizations, surgeries, cancer, and deaths. The OCFA was able to reap significant savings off the cost of medical services by utilizing facilities that were within the MPN. This results in a reduction in the OCFA’s financial liability.

### ***Occupational Clinics***

The OCFA started utilizing occupational clinics on July 1, 2014, which allowed employees to have 24/7 access to a physician within close proximity to all seventy-one fire stations and the Regional Fire Operations and Training Center. Risk Management continues to monitor the occupational clinics through the use of employee satisfaction surveys and site visits to ensure they are meeting established OCFA protocols, expectations, and performance standards. The table below summarizes MPN and occupational clinic usage and savings for the fiscal year.

<b>Occupational Clinic Usage</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Total Claims Reported	368	434	447
Total Claims using Occupational Clinics	212	277	303
Clinic Usage %	60.9%	68.7%	67.8%
Satisfaction Rating for Occupational Clinics	94.5%	98.6%	98.1%
Total MPN Usage %	78.2%	76.8%	78.6%
Total Bills Received**	12,167	13,574	14,043
Total Bills in MPN	9,015	10,421	11,037
<b>MPN Savings</b>	<b>\$1,167,104</b>	<b>\$7,248,775</b>	<b>\$7,149,274</b>

Table 2: MPN and Occupational Clinic Usage and Savings

*\*Represents percent of claims with actual treatment*

*\*\*does not include med-legal, DME, or Rx bills*

### ***Pharmacy Benefit Program (PBM)***

The PBM was designed to reduce the cost of medication and medical supplies by providing generics wherever possible and ensuring pharmacists in the program comply with Labor Code §4600.2 and Senate Bill 1160 which became effective January 1, 2018. SB 1160 assists with over-prescribing medication and opioid drugs by requiring new procedures for reviewing determinations regarding medical necessity of medication prescribed pursuant to drug formulary adopted by the Administrative Director. The pharmacy “first fill” card instituted as part of the program has prevented prescription delays and out-of-pocket expenses to the employee and increased savings above the official medical fee schedule. The table below summarizes the PBM program usage and savings.

<b>Pharmacy Benefit Program Usage</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Total Prescriptions Dispensed	2,115	2,307	2,347
Prescriptions Dispensed through PBM	1,630	1,942	2,074
CorVel PBM Usage %	77.1%	84.2%	88.4%
Prescription Charges	\$528,141	\$730,140	\$796,413
Total Paid	\$262,803	\$338,883	\$493,178
<b>Pharmacy Savings</b>	<b>\$265,339</b>	<b>\$391,257</b>	<b>\$303,235</b>

Table 3: PBM Program Usage and Savings

### ***Alternative Dispute Resolution Program (ADR)***

The ADR program is a collaborative effort between the Orange County Professional Firefighters Association, Local 3631, and Executive Management which was designed to expedite delivery of workers' compensation benefits by eliminating the delay process of the traditional workers' compensation system when disputes arise. The program was approved by the Department of Industrial Relations and became effective on October 1, 2014. The OCFA has experienced fewer delays, less litigation, faster medical treatment, and earlier resolution of disputes than in the traditional workers' compensation system, since the implementation of this program.

<b>ADR Tracking</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Count of claims eligible for ADR	374	422	427
Number of claims that entered into ADR	50	60	55
Percentage of Litigated Claims	19.7%	7.2%	5.8%
Average # of Days Until ADR Resolution	66	78	70

Table 4: ADR vs. Traditional Workers' Compensation System Comparison

### ***Enhanced Transitional Return to Work Program***

The enhancements in the transitional return to work program, which were implemented on August 1, 2015, include improved coordination and communications with departments and risk management, matching return to work assignments with the skills of the injured worker, establishing a central job bank of return to work assignments, and formal notification of restrictions between the supervisor and injured worker. These enhancements have allowed Risk Management to expedite the return to work process and return more employees to a light duty assignment which has reduced disability, enhanced the employee's sense of value, expanded job skills, improved retention and productivity, and maximized statutory workers' compensation benefits. The chart below summarizes the enhanced transitional return to work program for the fiscal year.

<b>Enhanced Transitional Return to Work Program</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Eligible Employees Returned to Light Duty	52	48	55
Percent Returned to Light Duty	86.7%	85.7%	87.3%
Returned to Light Duty Within 4 Business Days	45	44	54
Percent Returned to Light Duty Within 4 Business Days	75%	78.6%	85.7%
Assignment Requests Received	22	15	20
Assignments Filled with One or More Employees	16	13	20
Average Days on Light Duty	44	60	30
Median Days on Light Duty	17	39	14
Eligible Employees Not Returned to Light Duty	8	8	8
<b>Total Employees Eligible to Return to Light Duties</b>	<b>60</b>	<b>56</b>	<b>63</b>

Table 5: Transitional Return to Work Program Summary

### *Claims Settlement Committee*

The Board of Directors delegated workers' compensation claims settlement authority of \$50,000 or less to the Fire Chief or his/her designee. The Fire Chief has delegated settlements of \$25,000 or less to the Risk Manager. Workers' compensation claims settlement authority between \$50,000 and \$250,000 require approval of the Claims Settlement Committee and settlements over \$250,000 require full Board of Directors approval. The chart below summarizes the number of claims settlements that were approved during FY 2017/18.

<b>Settlement Approvals</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Fire Chief or Designee (Compromise and Release Settlements)			5
Fire Chief or Designee (Stipulation and Award Settlements)	64	59	158
Claims Settlement Committee (Compromise and Release Settlements)		19	8
Claims Settlement Committee (Stipulation and Award Settlements)	14	15	15
Board of Directors	1	3	0
<b>Total Claims</b>	<b>79</b>	<b>96</b>	<b>186</b>

Table 6: Settlements Approved

### *Summary and Conclusions*

Risk Management strives to ensure the services provided by CorVel Corporation remain compliant with the California workers' compensation laws and meet the needs of the OCFA employees. Although claims experience increased during the fiscal year, the workers compensation program continues to result in enhanced medical care to the injured employee and significant financial savings to the OCFA.

	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>TPA Administrative Fees</b>	\$544,614	\$560,952	\$572,171
<b>Bill Review Fees</b>	\$576,409	\$647,782	\$1,198,337
<b>Utilization Review Fees</b>	\$101,020	\$165,605	\$160,116
<b>Utilization Review Savings</b>	(\$300,236)	(\$383,506)	(\$222,903)
<b>PBM Savings</b>	(\$265,339)	(\$455,913)	(\$303,235)
<b>Bill Review Savings</b>	(\$5,865,635)	(\$7,248,775)	\$10,805,906)
<b>Total Costs/Savings</b>	<b>(\$5,209,167)</b>	<b>(\$6,713,855)</b>	<b>(\$9,401,420)</b>

Table 7: Overall Workers' Compensation Program Savings

Actuarial Study of the Workers Compensation Program  
of

**ORANGE COUNTY FIRE AUTHORITY**

Based on Claims Data Valued as of June 30, 2018  
("Valuation Date" and "Accounting Date") and  
Information Received through September 22, 2018  
("Review Date")

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Report Date: September 27, 2018

# TABLE OF CONTENTS

I.	Background and Objectives . . . . .	1
A.	Background. . . . .	1
B.	Objectives . . . . .	1
II.	Conclusions. . . . .	3
<b><u>Appendices</u></b>		
A	Conditions and Limitations . . . . .	12
B	Glossary of Actuarial Terms. . . . .	16
C	Exhibits . . . . .	26

## I. BACKGROUND AND OBJECTIVES

### A. Background

The Orange County Fire Authority (the “Authority” or “OCFA”) is a joint powers authority consisting of 23 partner cities and unincorporated areas in Orange County, California. The Authority was formed in March, 1995, and provides fire, emergency medical, search and rescue, fire prevention, and hazardous materials response services from 71 fire stations throughout Orange County. The population served includes over 1.3 million residents in over 551 square mile area of Orange County.

On March 1, 2002, the Board of Directors adopted a self-insurance workers compensation program. The self-insured retentions (“SIR”) have been \$600,000 per occurrence prior to January 1, 2004. Since January 1, 2004, the SIR has been \$2,000,000 per occurrence.

OCFA has purchased excess insurance attaching at the SIR. The current excess insurer is California State Association of Counties, Excess Insurance Authority (“CSAC-EIA”).

Through June 1, 2014, York Claims Service, Inc. (“York”) was the third party administrator handling the Authority’s claims. Effective June 1, 2014, claims are handled by CorVel Corporation (“CorVel”).

On April 20, 2012, OCFA entered into an agreement with the City of Santa Ana to assume its fire department workers’ compensation exposures. These exposures are included in this report.

#### Purpose and Context of the Report

This report has been prepared to guide the Authority in establishing appropriate loss reserve estimates on the self-insurance program described above. Therefore, the report should be treated as a confidential, internal document belonging to the Authority. Authorized recipients of the report are counseled to protect the confidentiality of the report.

The report should not be used for any other purpose other than those stated above. Moreover, the findings and conclusions contained in this report should be interpreted within the context of the specified purpose.

The findings and recommendations contained in this report are based on claims and financial data as of the valuation date. It is also based on any other pertinent information provided to us through the review date. (Both the valuation date and review date are specified on the cover of this report.) We are not aware of any information subsequent to these dates that would have a material impact on our analysis, findings or recommendations.

## B. Objectives

The specific objective of this study is to:

1. **Estimate the Outstanding Losses as of June 30, 2018.** Estimate the outstanding losses (including allocated loss adjustment expenses [ALAE]) and Unallocated Loss Adjustment Expenses as of June 30, 2018.

The estimated outstanding losses are the accrual cost of unpaid claims valued as of the accounting date. The estimated outstanding losses include case reserves, the development on known claims and incurred but not reported (IBNR) claims. ALAE are the direct expenses for settling specific claims. ULAE are the expenses for claims administration. The amounts reflect the specific and annual aggregate limits maintained by OCFA.

2. **Project Ultimate Limited Losses for the Periods Effective July 1, 2018-19, July 1 2019-20 and July 1, 2020-21.** Project the ultimate limited losses including ALAE and ULAE for claims with dates of loss during the next three upcoming periods.

The projected ultimate limited losses are the ultimate settlement value of all claims with dates of loss during each period, but capped at the Authority's SIR.

3. **Project Losses Paid for the Next Three Fiscal Years.** Project the losses paid (including allocated loss adjustment expenses ALAE and ULAE for claims disbursements made during 2018/19, 2019/20 and 2020/21.

4. **Affirm Government Accounting Standards Board Statement Number 10 ("GASB 10").**

Issue a statement affirming that the work performed and the conclusions contained in this report are consistent with GASB 10.

5. **Project Ultimate Limited Losses for All Historical Periods from March 1, 2002 Through 2017/18.** Project the ultimate limited losses including ALAE for all historical claim periods (self-insured periods only) through 2017/18.

The projected ultimate limited losses are the ultimate settlement value of all claims with dates of loss during each period, but capped at the Authority's SIR.



## II. Conclusions

We have reached the following conclusions:

1. **Estimate the Outstanding Losses as of June 30, 2018.**

We estimate the outstanding losses as of June 30, 2018 to be as shown in Table II-1.

**Table II-1  
Estimated Outstanding Losses (including ALAE) and ULAE  
As of June 30, 2018**

Confidence Level (1)	Estimated Outstanding Losses (2)	Present Value of Estimated Outstanding Losses (3)
(A) Expected (i.e., 50%)	\$84,371,700	\$77,393,501
(B) 60%	\$87,746,568	\$80,489,241
(C) 70%	\$93,652,587	\$85,906,786
(D) 80%	\$101,246,040	<b>\$92,872,201</b>
(E) 90%	\$109,683,210	\$100,611,551
(F) ULAE	\$5,906,019	<b>\$5,417,545</b>

Note: (A) is extracted from Appendix C, Exhibit WC-11, columns (2) and (4).  
 (B) through (E) are based on (A) and confidence level factors derived from a loss distribution with a Coefficient of Variation of 0.20 and actuarial judgment.  
 (F) = (A) x 0.07 based previous analyses and actuarial judgment.

The estimated outstanding losses reflect the insurance limits maintained by OCFA. The amounts in column (2) above are undiscounted. The amounts in column (3) are discounted based on a 2% interest rate on earnings assumption.

Row (F), column (3) shows the discounted ULAE provision. Both provisions should be recognized on the Authority's financial statements.

The estimated ULAE in Table II-1, row (F) is the total dollar amount required to handle all claims that have occurred on or before the Accounting Date to their final settlement.

### Current Liabilities vs. Long-Term Liabilities

Current liabilities are the amount of estimated outstanding losses that OCFA is expected to pay off during the next fiscal year. Long-term liabilities are the remaining estimated outstanding losses (i.e., the portion of estimated outstanding losses that will be paid off in fiscal years beyond the upcoming fiscal year.)

We have estimated the current liabilities to be \$8,437,170 (cf. Exhibit WC-12, page 1, row (12)). The long-term liabilities are the difference between the amounts shown in Table II-1 above and the current liabilities.

2. **Project the Ultimate Limited Losses (including ALAE) and ULAE for 2018/19, 2019/20 and 2020/21.**

We project the ultimate limited losses (including ALAE) and ULAE for claims with dates of loss in 2018/19, 2019/20 and 2020/21 to be as shown in Table II-2A, Table II-2B and Table II-2C, respectively.

**Table II-2A  
Projected Ultimate Limited Losses (including ALAE) and ULAE  
July 1, 2018-19**

Confidence Level (1)	Projected Ultimate Limited Losses (2)	Present Value of Ultimate Limited Losses (3)
(A) Expected (i.e., 50%)	\$20,063,820	\$17,866,354
(B) 60%	\$21,067,011	\$18,759,672
(C) 70%	\$22,872,755	\$20,367,644
(D) 80%	<b>\$25,280,413</b>	\$22,511,606
(E) 90%	\$29,092,539	\$25,906,213
(F) ULAE	\$1,404,467	\$1,250,645

Note: (A) is extracted from Appendix C, Exhibit WC-9, columns (9) and (12).  
 (A) is based on projected payroll as shown in Exhibit WC-9.  
 (B) through (E) are based on a (A) and confidence level factors derived from a loss distribution with a Coefficient of Variation of 0.25 and actuarial judgment.  
 (F) = 7.0% of (A), which is based on historical TPA fees, other similar programs with which we are familiar and actuarial judgment.

The projected ultimate limited losses reflect OCFA’s SIR of \$2,000,000 per occurrence. The ULAE funding recommendation reflects the ultimate third party administration fees to handle those claims that occur during 2018/19. We emphasize the third party administration fees to be paid during the period will exceed this amount because the third party administrator will be handling claims that occurred in prior periods. However, the fees associated with handling these prior claims during the period have been accounted for in our estimated outstanding ULAE from Table II-1, row (F).

We project the ultimate limited losses (including ALAE) and ULAE for 2019/20 to be as shown in Table II-2B

**Table II-2B**  
**Projected Ultimate Limited Losses (including ALAE) and ULAE**  
**July 1, 2019-20**

Confidence Level (1)	Projected Ultimate Limited Losses (2)	Present Value of Ultimate Limited Losses (3)
(A) Expected (i.e., 50%)	\$21,177,458	\$18,855,023
(B) 60%	\$22,236,331	\$19,797,774
(C) 70%	\$24,142,302	\$21,494,726
(D) 80%	\$26,683,597	\$23,757,329
(E) 90%	\$30,707,314	\$27,339,783
(F) ULAE	\$1,482,422	\$1,319,852

Note: (A) is extracted from Appendix C, Exhibit WC-9, columns (9) and (12).  
 (A) is based on projected payroll as shown in Exhibit WC-9.  
 (B) through (E) are based on a (A) and confidence level factors derived from a loss distribution with a Coefficient of Variation of 0.25 and actuarial judgment.  
 (F) = 7.0% of (A), which is based on historical TPA fees, other similar programs with which we are familiar and actuarial judgment.

The projected ultimate limited losses (including ALAE) assume OCFA will retain the first \$2,000,000 per occurrence in 2019/20. The projected ultimate ULAE for 2019/20 assumes OCFA will contract with a third party administrator subject to similar terms and conditions that are in effect with the current contract.

We project the ultimate limited losses (including ALAE) and ULAE for 2020/21 to be as shown in Table II-2C.

**Table II-2C  
Projected Ultimate Limited Losses (including ALAE) and ULAE  
July 1, 2020-21**

Confidence Level (1)	Projected Ultimate Limited Losses (2)	Present Value of Ultimate Limited Losses (3)
(A) Expected (i.e., 50%)	\$22,360,128	\$19,907,204
(B) 60%	\$23,478,134	\$20,902,564
(C) 70%	\$25,490,546	\$22,694,213
(D) 80%	\$28,173,761	\$25,083,077
(E) 90%	\$32,422,186	\$28,865,446
(F) ULAE	\$1,565,209	\$1,393,504

Note: (A) is extracted from Appendix C, Exhibit WC-9, columns (9) and (12).  
 (A) is based on projected payroll as shown in Exhibit WC-9.  
 (B) through (E) are based on a (A) and confidence level factors derived from a loss distribution with a Coefficient of Variation of 0.25 and actuarial judgment.  
 (F) = 7.0% of (A), which is based on historical TPA fees, other similar programs with which we are familiar and actuarial judgment.

The projected ultimate limited losses (including ALAE) assume OCFA will retain the first \$2,000,000 per occurrence in 2020/21. The projected ultimate ULAE for 2020/21 assumes OCFA will contract with a third party administrator subject to similar terms and conditions that are in effect with the current contract.

3. **Project the Losses (including ALAE) and ULAE to be Paid in 2018/19, 2019/20 and 2020/21.**

We project the losses (including ALAE) and ULAE to be paid in 2018/19, 2019/20 and 2020/21 to be as shown in Table II-3.

**Table II-3  
Projected Losses (including ALAE) and ULAE To Be Paid in  
2017/18, 2018/19 and 2019/20**

Fiscal Period (1)	Projected Losses (including ALAE) Paid (2)	Projected ULAE Paid (3)
(A) July 1, 2018-19	\$10,383,361	\$726,835
(B) July 1, 2019-20	\$11,459,428	\$802,160
(C) July 1, 2020-21	\$12,545,953	\$878,217

Note: (2) is extracted from Appendix C, Exhibit WC-12, column (8).

(3) = (2) x 7%. The percentage is selected based on the ratio of historical payments.

4. **Affirm GASB 10.**

We affirm that the conclusions shown above in the tables were derived using appropriate actuarial methods and assumptions. Therefore, our conclusions are consistent with GASB 10. The actuarial methods and assumptions we used to derive these conclusions are documented in the exhibits shown in Appendix C of this report.

We encourage the independent auditor to contact us with any questions to ensure our report is interpreted correctly, and is incorporated appropriately into the independent financial audit of OCFA.

5. **Project Ultimate Limited Losses for All Historical Periods from March 1, 2002 Through 2017/18 at the 80% Confidence Level.**

We project the ultimate limited losses (including ALAE) at the 80% confidence level for all self-insured periods to be as shown in Table II-5, column (3). Table II-5 is shown on the next page.



**Table II-5**

Projected Ultimate Limited Losses at the 80% Confidence Level

Claim Period (1)	Projected Ultimate Limited Losses Expected Confidence Level (2)	Projected Ultimate Limited Losses 80% Confidence Level (3)
2002	2,404,568	2,463,821
2002/03	8,111,027	8,363,156
2003/04	4,822,157	4,941,324
2004/05	6,079,304	6,267,133
2005/06	8,177,555	8,588,181
2006/07	9,426,035	9,742,556
2007/08	10,426,262	10,997,492
2008/09	8,890,828	9,244,763
2009/10	11,766,583	12,502,552
2010/11	12,113,166	13,008,688
2011/12	12,675,917	13,675,720
2012/13	13,097,127	14,117,285
2013/14	13,518,795	14,756,589
2014/15	14,128,834	15,598,632
2015/16	15,661,987	17,474,463
2016/17	19,462,987	22,279,938
2017/18	21,496,625	25,111,803
Total	192,259,757	209,134,097

### ***Discussion of Data Reliance***

Responsible staff members of CorVel, York and OCFA provided us with loss data and payroll data. The loss data we received was contained in Excel files. The different files contained claims data valued as of different accounting dates (from June 30, 2009 and successive June 30<sup>th</sup> and December 31<sup>st</sup> valuations.) We compiled the data in these files and compared the results. Generally, we found all files to be internally consistent.

However, for the June 30, 2018 valuation, Corvel informed us of miscoding of 4850 benefits received from York in claim periods 2013/14 and prior. Corvel performed a clean-up of 4850 payments in these periods. Consequently, there were noticeable changes to the compiled loss data for 2013/14 and prior, which may have some impact on the indications arising from the analysis.

We highlight the case reserves for 4850 benefits in 2013/14 are substantial and appear unreasonable. Therefore, we have ignored these case reserves, and consider these amounts closed. Supporting our hypothesis, we notice that the case reserves in 2014/15 and subsequent total less than \$50,000 as of the Valuation Date. Likewise, we have treated 4850 benefits in 2014/15 and subsequent as closed. For periods 2014/15 and subsequent, the impact on the indications is immaterial (i.e., less than 1% of the overall estimated outstanding losses.)

In all other ways, we compared the compiled data with the data shown in previous actuarial reports prepared by us in past years. Our data compilation proved consistent with the summarized data shown in the previous actuarial report.

### ***Comparisons with Previous Report***

Our previous report (based on claims data valued as of December 31, 2017), showed projected ultimate losses for 2016/17 and prior to total approximately \$169.0 million, and our forecast for 2017/18 had been approximately \$18.3 million. Our updated projection of ultimate losses for 2016/17 and prior totals \$170.7 million, and our updated forecast for 2017/18 totals \$21.5 million.

**Appendix A**

**CONDITIONS AND LIMITATIONS**

## CONDITIONS AND LIMITATIONS

It is important to understand the conditions and limitations listed below. Each chapter and section is an integral part of the whole study. If there are questions, please contact RCS for clarification.

- **Data Quality.** We relied upon data provided by the organization shown on the transmittal page or its designated agents. The data was used without verification or audit, other than checks for reasonableness. Unless otherwise stated, we assumed the data to be correct and complete.
- **Economic Environment.** Unless otherwise stated, we assumed the current economic conditions will continue in the foreseeable future.
- **Insurance Coverage.** Unless otherwise stated, we assumed no insurance coverage changes (including coverage provided by the organization to others) subsequent to the date this study was prepared. This includes coverage language, self-insured retention, limitations and similar issues.
- **Insurance Solvency.** Unless otherwise stated, we assumed all insurance purchased by the organization is from solvent sources payable in accordance with terms of the coverage document.
- **Interest Rate.** The exhibits specify the annual interest rate(s) used. The interest rate(s) used were specified by the organization shown on the transmittal page or its designated agents. We express no opinion regarding the appropriateness of the interest rate(s) used in this report.
- **Methodology.** In this study, different actuarial methods were applied. In some instances, the methods yield significantly disparate results. The estimates, projections and recommendations in this study reflect our judgments as to the best method or combination of methods that are most reliable and reflective of the exposure to loss.
- **Reproduction.** This study may only be reproduced in its entirety. We caution third parties to not distribute this report to any party without the express written consent of RCS and the parties, who engaged RCS to prepare this report, because the report contains privileged information and unauthorized distribution of the report might be a violation of local laws. In particular, we direct the reader to the California Code of Regulations, Title 8, Section 15405, and recommend seeking legal advice before disseminating any information contained in this report to any party. Moreover, ASOP 21, Section 3, Paragraph 4, states, “An audit or examination may give rise to the exchange of confidential information. Any information received by the reviewing actuary should be considered confidential, except as to the auditor or examiner, unless otherwise indicated by the entity. The reviewing actuary should take appropriate steps to preserve the confidentiality of such information.”
- **Risk and Variability.** Insurance is an inherently risky enterprise. Actual losses may vary significantly from our estimates, projections and recommendations. They may emerge higher or lower.

- **Statutory and Judicial Changes.** Legislatures and judiciaries may change statutes that govern indemnification. This includes benefit levels for workers compensation, immunities and limitations for liability, and other similar issues. Unless otherwise stated, we assumed no statutory changes subsequent to the date this study was prepared.
- **Supplemental Data.** In addition to the data provided by the organization, we supplemented our analysis with data from similar organizations and insurance industry statistics, as we deemed appropriate.
- **Usage.** This study has been prepared for the usage of the organization shown on the transmittal page. It was not prepared for and may not be appropriate for use by other organizations. Other organizations should obtain counsel from RCS prior to use of this study.
- **Assets.** We have not examined the assets underlying the corresponding losses and ALAE under review. We form no opinion as to the validity or value of these assets. Throughout our analysis, we assume the reserves are backed by valid assets, which have suitably scheduled maturities or adequate liquidity to meet cash flow requirements.
- **Mass Tort and Terrorism.** Unless specifically stated, our analysis does not reflect any provision for risk exposure from mass torts or terrorism, because these risk exposures were outside the scope of our work.
- **Intended Use Disclosure (per ASOP 43).** We understand the intended use of the estimated outstanding losses is for internal management reporting and external financial reporting purposes. Because the internal management reporting is consistent with external financial reporting, we are unaware of conflicts (actual or otherwise) that might arise from this dual usage.
- **Constraints Disclosure (per ASOP 43).** We worked with the most readily available data provided by OCFA and its claims administrator(s). The data appeared to be of excellent quality. We were provided ample time to perform the work; therefore, we have no constraints regarding deadlines. In addition, the OCFA and its claims administrator(s) cooperated fully with our requests for information.
- **Scope of Unpaid Claim Estimate Disclosure #1 – Type of Estimate (per ASOP 43).** Throughout the report, we calculated an “actuarial central estimate” of the loss reserve. We have also included a range of reasonable estimates of the loss reserves expressed in the form of confidence levels. We emphasize that the range of reasonable estimates is not a range of all possible outcomes; rather, it is our estimate of likely outcomes of the actuarial central estimate. Although unlikely, losses may emerge outside our range of reasonable estimates.
- **Scope of Unpaid Claim Estimate Disclosure #2 – Purpose of Estimate (per ASOP 43).** We believe the range of reasonably possible outcomes around the actuarial central estimate is an appropriate guide to management for internal and external financial reporting purposes.
- **Scope of Unpaid Claim Estimate Disclosure #3 – Discounting (per ASOP 43).** We calculated our range of reasonably possible outcomes around the actuarial central estimates at full-value (i.e., undiscounted). We calculated estimates at present value (i.e., discounted to reflect the time value of money).

- **Gross or Net of Specified Recoverables Disclosure (per ASOP 43).** Because the OCFA purchases reinsurance and/or participates in insurance pools, all amounts in this report should be understood to be net of recoverables unless specifically identified to the contrary.
- **Collectability Risk Disclosure (per ASOP 43).** Except as otherwise noted in our report, our discussions with the OCFA did not reveal any collectability risk as of the date of this report.
- **Unpaid Claim Adjustment Expense Disclosure (per ASOP 43).** A provision for ULAE is included in the amounts shown in this report. Amounts for ALAE have been included.
- **Type of Claims Covered in the Analysis Disclosure (per ASOP 43).** The background section of this report describes the type of claims covered in the analysis. In addition, the text in the conclusion section specifies any modifications to the description contained in the background section.
- **Review Date Disclosure (per ASOP 43).** Our “review date” (i.e., cut-off date for including information into our analysis) is the date shown on the cover of the report or the date of the transmittal letter.
- **Acknowledgement of Qualification (per ASOP 41).** The opining actuary(ies) that have prepared this report meet the requisite qualification standards as enacted in the “Qualification Standards” effective January 1, 2008.

**Appendix B**

**GLOSSARY OF ACTUARIAL TERMS**



## GLOSSARY OF ACTUARIAL TERMS

### Actuarial Methods (Most Common)

A major objective of an actuarial study is to statistically project ultimate losses. The following actuarial methods are the most common:

- Developed Paid Losses
- Developed Reported Incurred Losses
- Developed Case Reserves
- Frequency Times Severity Analysis
- Loss Rate Analysis

The following describes each method:

1. **Developed Paid Losses.** Paid losses represent the amounts actually paid to claimants (less excess insurance recoveries). As time goes on, loss payments continue until all claims are closed and there are no remaining payments expected. At this time, the ultimate losses for the claim period are known. This common process is called “paid loss development.”

Paid loss development is an extrapolation of actual dollars paid. It does not depend on case reserve estimates. A potential shortcoming of utilizing this method is that only a small fraction of total payments have been made for the most recent claim periods. Extrapolating ultimate losses based on small amounts of actual payments may be speculative. A second potential shortcoming is that payment patterns can change over time.

2. **Developed Reported Incurred Losses.** Reported incurred losses are paid losses plus case reserves. In most programs, total reported incurred losses underestimate the ultimate losses. Over time, as more information about a body of claims becomes known, they are adjusted either up or down until they are closed. Though many individual claims settle for less than what was estimated, these decreases are generally more than offset by increases in the cost of other claims for which new information has emerged.

The net effect is that total estimated costs are often revised upward over time. This normal process is called “reported incurred loss development.” Actuaries typically review the development patterns of the recent past to make projections of the expected future loss development and, therefore, estimations of ultimate losses.

3. **Developed Case Reserves.** The developed case reserves method is a hybrid of the paid loss development and reported incurred loss development methods. It relies on the historical adequacy of case reserves to predict ultimate losses.

4. **Frequency Times Severity Analysis.** The frequency times severity analysis is an actuarial method that uses a preliminary projection of ultimate losses to project claims severity. The claims severity times the number of claims is a predictor of ultimate losses. The focus of the frequency times severity analysis is that ultimate losses each period are dependent on the number of claims.
5. **Loss Rate Analysis.** The loss rate analysis is based on the historical loss rates per exposure unit (such as payroll, vehicles or property value). The loss rates (projected ultimate losses divided by exposure units) are trended to reflect the effect of claim cost inflation and retention changes. The trended loss rates represent the rates that one would see if all of the claims had been handled in the claim cost environment that will be present in the upcoming period. The trended loss rate times the projected exposure units is a predictor of losses.
6. **Bornhuetter-Ferguson Method (B-F).** The B-F method is an actuarial method that weights a preliminary projection of ultimate losses with projections of ultimate losses determined by other actuarial methods (usually the developed paid losses and developed reported incurred losses methods). For less mature claim periods, the B-F method leans more heavily to the preliminary projection. It gradually converges to the projections of ultimate losses determined by the other actuarial methods as the claim periods mature.

### **Actuary**

A specialist trained in mathematics, statistics, and finance who is responsible for rate, reserve, and dividend calculations and other statistical studies.

### **Allocated Loss Adjustment Expenses**

Allocated loss adjustment expenses (ALAE) are the direct expenses to settle specific claims. These expenses are primarily legal expenses.

Accounting standards require that ALAE be included in financial statements and that they be calculated by actuarial methods.

### **American Academy of Actuaries**

A society concerned with the development of education in the field of actuarial science and with the enhancement of standards in the actuarial field. Members may use the designation MAAA (Member, American Academy of Actuaries).

## **Benefits**

The financial reimbursement and other services provided insureds by insurers under the terms of an insurance contract. An example would be the benefits listed under a life or health insurance policy or benefits as prescribed by a workers compensation law.

## **Casualty Actuarial Society**

A professional society for actuaries in areas of property and casualty insurance work. This society grants the designation of Associate of the Casualty Actuarial Society (ACAS) and Fellow of the Casualty Actuarial Society (FCAS).

## **Claim**

Demand by an individual or entity to recover for a loss.

## **Claims Made**

A policy written on this basis covers only those claims that are made during the policy period. Coverage for prior acts is provided back to what is known as the retroactive date, which is the effective date of the original claims made policy with the same insurer.

## **Composite Rate**

A single rate with a single basis of premium (e.g., payroll or sales). For this single rate the insured is covered for a variety of hazards, such as premises and operations, completed operations, products liability, and automobile. Its primary value is to compute premium simply.

## **Confidence Level**

A confidence level is the statistical certainty that an actuary believes funding will be sufficient. For example, an 80% confidence level means that the actuary believes funding will be sufficient in eight years out of ten.

Confidence levels are determined based on mathematical models. Coverages that are low frequency and high severity (such as excess liability) are subject to greater risk than coverages that are high frequency and low severity (such as automobile physical damage). Therefore, they need a greater margin to attain a given confidence level.

Expected corresponds to approximately a 55% confidence level. Amounts above expected are prudent, but should be considered equity (not a liability).

### **Coverage**

The scope of the protection provided under a contract of insurance.

### **Credibility**

Credibility is the belief that the sample data is an accurate reflection of the larger population. Credibility is highest when the sample data is large and the standard deviation (discussed later) of the larger population is low.

### **Dates**

There are at least three milestone dates in a claim. They are the date of injury or accident, the date of report and the date of closure. It is best if each of these dates is recorded. Some organizations may also keep the date a claim becomes a lawsuit, as opposed to a demand. RCS recommends this additional level of detail, especially if the data is to be used for litigation management.

### **Deductible**

The portion of an insured loss to be borne by the insured before he is entitled to recovery from the insurer. Deductibles may be expressed as a dollar amount, percentage or waiting period.

### **Disability**

A condition that curtails a person's ability to carry on his normal pursuits. A disability may be partial or total, and temporary or permanent.

### **Dividend (Policyholder)**

The return of part of the premium paid for a policy issued on a participating basis by either a mutual or a stock insurer.

### **Estimated Outstanding Losses**

Estimated outstanding losses are the cost of claims that have occurred but have not yet been paid. They typically include indemnification and allocated loss adjustment expenses (ALAE), but not unallocated loss adjustment expenses (ULAE).

Estimated outstanding losses are calculated as projected ultimate losses less paid losses. Alternatively, they are the sum of case reserves and incurred but not reported (IBNR) claims.

### **Estimated Outstanding Losses (continued)**

Estimated outstanding losses are usually the largest single item listed as a liability on the balance sheet of an insurer's financial statement. Accounting standards require they be calculated by actuarial methods. Other common names for estimated outstanding losses are outstanding claims liabilities and unpaid claims.

The uncertainty inherent in the estimation of required provision for unpaid losses or loss adjustment expenses implies that a range of reserves can be actuarially sound. The true value of the liability for losses or loss adjustment expenses at any accounting date can be known only when all attendant claims have been settled.

The most appropriate reserve within a range of actuarially sound estimates depends on both the relative likelihood of estimates within the range and the financial reporting context in which the reserve will be presented.

### **Experience Rating**

A method of adjusting the premium for a risk based on past loss experience for that risk compared to loss experience for an average risk.

### **Exposure Data**

Exposure data refers to the activities of the organization. For example, payroll is the most common exposure measure for workers compensation. RCS suggests collecting exposure data with the following characteristics:

- **Readily Available.** The exposure data should be easily obtained. It is best if it is a byproduct of other activities, although this is not always possible. If getting data is arduous, it may discourage collection.
- **Vary With Losses.** The exposure data should correlate directly with losses. The ideal situation is where exposure and expected losses move in tandem. The exposure base needs to be fitting to the coverage. For example, the number of employees may vary with property losses (more employees = more office space = more losses), but property value is a clearly superior exposure base for property losses.

### **Generally Accepted Accounting Principles (GAAP)**

These principles are intended to produce financial results (in the insurance industry) consistent with those of other industries and to assure consistency in financial reporting.

### **Incurred But Not Reported**

IBNR is really comprised of two distinct items. These are the development of known case reserves (incurred but not enough reported [IBNER] and incurred but not yet reported [IBNYR]).

IBNER are the actuary's estimate of the inadequacy of case reserves. Most claims settle at amounts close to what is set by the claims administrator. Some claims close favorably and some emerge as more expensive. On balance, case reserves tend to be too low (especially for recent years). IBNER is the actuary's estimate of the amount total case reserves will rise upon closure.

IBNYR refers to those claims that have occurred, but have not yet been reported. A classic example is medical malpractice claim reported several years after the medical procedure was performed.

### **Insurance Services Office (ISO)**

An organization of the property and casualty insurance business designed to gather statistics, promulgate rates, and develop policy forms.

### **Investment Income**

The return received by entities from their investment portfolios, including interest, dividends and realized capital gains on stocks. Realized capital gains means the profit realized on assets that have actually been sold for more their purchase price.

### **Limited**

Most programs purchase excess insurance for catastrophic claims. For example, they may purchase coverage for claims above a \$500,000 per occurrence self-insured retention. Limited refers to an estimate or projection being limited to the self-insured retention. In contrast, unlimited refers to a loss projection that is not limited to the self-insured retention.

Other common names for limited are net of excess insurance or capped losses.

### **Loss Development**

The difference between the amount of losses initially estimated by the insurer and the amount reported in an evaluation on a later date. Loss development is typically measured for paid losses, reported incurred losses and claim counts.

### **Manual Rates**

Usually, the published rate for some unit of insurance. An example is in the workers compensation manual, where the rates shown apply to each \$100 of the payroll of the insured, \$100 being the "unit."

## **National Council on Compensation Insurance (NCCI)**

An association of workers compensation insurance companies whose main functions are collecting statistics and calculating rates, establishing policy wording, developing experience and retrospective rating plans, and serving as the filing organization for member companies.

## **Net**

Many pooling programs assign deductibles to members. For example, each member may have a \$5,000 per claim deductible. "Net" refers to a loss estimate or projection that excludes amounts below member deductibles.

## **Occurrence**

An event that results in an insured loss. In some lines of insurance, such as general liability, it is distinguished from accident in that the loss does not have to be sudden and fortuitous and can result from continuous or repeated exposure that results in bodily injury or property damage neither expected nor intended by the insured.

## **Pool**

An organization of entities through which particular types of risks are written with the premiums, losses, and expenses shared in agreed amounts among the members belonging to the organization.

## **Premium**

The price of insurance protection for a specified risk for a specified period of time.

## **Present Value**

The amount of money that future amounts receivable are currently worth. For example, a Life Insurance policy may provide for payments to be made monthly for ten years. The present value of that money would be less than the total amount of the regular periodic payments for 10 years because of the amount of interest that a present lump sum could earn during the term than the payments otherwise would have been made.

## **Probability**

The probability is the likelihood of an event. It is a measure of how likely a value or event is to occur. It can be measured from data by calculating the number of occurrences of the value or event divided by the total number of occurrences. This calculation can be converted to a percentage. For example, tossing a coin has a 50% probability of heads or tails.

### **Projected Losses Paid**

Projected losses paid are the projected claims disbursements in a period, regardless of when the claim occurred. They typically include indemnification and ALAE, but not unallocated loss adjustment expenses (ULAE).

“Projected losses paid” is a cash-flow analysis that can be used in making investment decisions.

### **Projected Ultimate Losses**

Projected ultimate losses are the accrual value of claims. They are the total amount that is expected to be paid in a particular claim period after all claims are closed. Projected ultimate losses are the total loss costs for a particular period. They typically include indemnification and ALAE, but not ULAE.

Other common names for projected ultimate losses are expected losses, ultimate losses and total losses.

### **Range of Reasonable Estimates**

According to actuarial statements of principles and standards of practice, a range of reasonable estimates of the provision for unpaid claims can be actuarially sound.

Due to the uncertainty inherent in estimating the provision for unpaid claims, the range of reasonable estimates is a narrower range than the range of all possible outcomes or the range of all likely outcomes.

### **Rate**

The cost of a given unit of insurance. For example, in life insurance, it is the price of \$1,000 of the face amount. In property insurance, it is the rate per \$100 of value to be insured. The premium is the rate multiplied by the number of units of insurance purchased.

### **Retrospective Rating**

A method for which the final premium is not determined until the end of the coverage period, and is based on the insured’s own loss experience for that same period. It is usually subject to a maximum and minimum premium. A plan of this type can be used in various types of insurance, especially workers compensation and liability, and is usually elected by only very large insureds.

### **Salvage**

Property taken over by an entity to reduce its loss. Automobile physical damage losses can be reduced by the sale of recovered vehicles.



### **Schedule Rating**

The application of debits or credits within established ranges for various characteristics of a risk according to an established schedule of items. Under liability and automobile insurance, the schedule rating plan allows credits and debits for various good or bad features of a particular commercial risk. An example in automobile schedule rating would be allowing credits for driver training classes or fleet maintenance programs.

### **Self-Insurance Retention (SIR)**

That portion of a risk or potential loss assumed by an insured. It is often in the form of a per occurrence deductible.

### **Society of Actuaries (SOA)**

A professional society for actuaries in areas of pensions, and life and health insurance work. The SOA grants the designation Associate of the Society of Actuaries (ASA) and Fellow of the Society of Actuaries (FSA).

### **Standard Premium**

Most often used in connection with retrospective rating for Workers Compensation and General Liability Insurance, it is the premium of which the basic premium is a percentage and is developed by applying the regular rates to an insured's payroll.

### **State Fund**

A fund set up by a state government to finance a mandatory insurance system, such as Workers Compensation or non-occupational disability benefits. Such a fund may be monopolistic, i.e., purchasers of the type of insurance required must place it in the state fund; or it may be competitive, i.e., an alternative to private insurance if the purchaser desires to use it.

### **Statutory Accounting Principles (SAP)**

Those principles required by statute that must be followed by an insurance company or other similar entity when submitting its financial statement to the state insurance department. Such principles differ from (GAAP) in some important respects. For one thing SAP requires that expenses must be recorded immediately and cannot be deferred to track with premiums as they are earned and taken into revenue.

### **Unallocated Loss Adjustment Expenses**

Unallocated loss adjustment expenses (ULAE) are the indirect expenses to settle claims. These expenses are primarily administration and claims handling expenses.

Accounting standards require that ULAE be included in financial statements and that they be calculated by actuarial methods.

# EXHIBITS

## Appendix C

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-1

Data Valued as of June 30, 2018

Claim Period (1)	Specific Self-Insured Retention (2)	Months of Development 6/30/18 (3)	Reported Claims 6/30/18 (4)	Open Claims 6/30/18 (5)	Limited Paid Losses 6/30/18 (6)	Limited Case Reserves 6/30/18 (7)	Limited Reported Incurred Losses 6/30/18 (8)
1995/96	N/A	276.0	0	0	\$0	\$0	\$0
1996/97	N/A	264.0	0	0	0	0	0
1997/98	N/A	252.0	0	0	0	0	0
1998/99	N/A	240.0	0	0	0	0	0
1999/00	N/A	228.0	0	0	0	0	0
2000/01	N/A	216.0	0	0	0	0	0
2001/02	600,000	204.0	132	4	2,108,301	237,013	2,345,314
2002/03	600,000	192.0	406	17	6,850,383	1,008,515	7,858,898
2003/04	2,000,000	180.0	320	8	4,226,324	476,666	4,702,991
2004/05	2,000,000	168.0	337	12	5,140,156	751,319	5,891,474
2005/06	2,000,000	156.0	395	19	6,124,423	1,606,853	7,731,276
2006/07	2,000,000	144.0	422	15	7,843,432	903,964	8,747,396
2007/08	2,000,000	132.0	475	20	7,570,115	1,803,206	9,373,321
2008/09	2,000,000	120.0	459	19	7,121,155	911,614	8,032,769
2009/10	2,000,000	108.0	469	20	8,086,738	1,871,957	9,958,694
2010/11	2,000,000	96.0	392	29	7,635,555	1,994,650	9,630,205
2011/12	2,000,000	84.0	471	42	7,676,901	2,323,508	10,000,409
2012/13	2,000,000	72.0	483	58	7,996,336	2,121,163	10,117,499
2013/14	2,000,000	60.0	529	73	7,329,823	2,658,279	9,988,101
2014/15	2,000,000	48.0	382	88	6,779,842	3,148,871	9,928,713
2015/16	2,000,000	36.0	396	108	6,599,606	4,106,940	10,706,546
2016/17	2,000,000	24.0	449	155	5,378,229	6,264,366	11,642,594
2017/18	2,000,000	12.0	447	242	3,420,738	5,956,561	9,377,300
<b>Total</b>			<b>6,964</b>	<b>929</b>	<b>\$107,888,057 #</b>	<b>\$38,145,444 #</b>	<b>\$146,033,501 #</b>

# - Data is for medical, indemnity and expenses excluding 4850 benefits.

(6), (7) and (8) are net of specific excess reinsurance, but gross of aggregate reinsurance.

Data was provided by Corvel.

ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-2 (page 1)

Summary of Percent Losses Paid, Losses Reported and Claims Reported

Months of Development (1)	Percent Losses Paid (2)	Percent Losses Reported (3)	Percent Claims Reported (4)	Months of Development (5)	Percent Losses Paid (6)	Percent Losses Reported (7)	Percent Claims Reported (8)
360.0	100.0%	100.0%	100.0%	360.0	100.0%	100.0%	100.0%
348.0	100.0%	100.0%	100.0%	348.0	100.0%	100.0%	100.0%
336.0	100.0%	100.0%	100.0%	336.0	100.0%	100.0%	100.0%
324.0	100.0%	100.0%	100.0%	324.0	100.0%	100.0%	100.0%
312.0	99.9%	100.0%	100.0%	312.0	99.9%	100.0%	100.0%
300.0	99.9%	100.0%	100.0%	300.0	99.9%	100.0%	100.0%
288.0	99.9%	100.0%	100.0%	288.0	99.9%	100.0%	100.0%
276.0	99.8%	100.0%	100.0%	276.0	99.8%	100.0%	100.0%
264.0	99.7%	100.0%	100.0%	264.0	99.7%	100.0%	100.0%
252.0	99.6%	100.0%	100.0%	252.0	99.6%	100.0%	100.0%
240.0	99.4%	100.0%	100.0%	240.0	99.4%	100.0%	100.0%
228.0	99.2%	100.0%	100.0%	228.0	99.2%	100.0%	100.0%
216.0	98.8%	100.0%	100.0%	216.0	98.8%	100.0%	100.0%
204.0	98.4%	100.0%	100.0%	204.0	98.4%	100.0%	100.0%
192.0	97.6%	99.9%	100.0%	192.0	97.6%	99.9%	100.0%
180.0	96.6%	99.6%	100.0%	180.0	96.6%	99.6%	100.0%
168.0	95.2%	97.6%	100.0%	168.0	95.2%	97.6%	100.0%
156.0	93.5%	96.2%	100.0%	156.0	93.5%	96.2%	100.0%
144.0	91.5%	94.4%	100.0%	144.0	91.5%	94.4%	100.0%
132.0	85.6%	91.2%	100.0%	132.0	85.6%	91.2%	100.0%
120.0	81.5%	90.3%	100.0%	120.0	81.5%	90.3%	100.0%
108.0	74.9%	84.9%	100.0%	108.0	74.9%	84.9%	100.0%
96.0	69.8%	80.2%	100.0%	96.0	69.8%	80.2%	100.0%
84.0	65.2%	78.9%	100.0%	84.0	65.2%	78.9%	100.0%
72.0	60.4%	77.3%	100.0%	72.0	60.4%	77.3%	100.0%
60.0	50.0%	75.0%	99.6%	60.0	50.0%	75.0%	99.6%
48.0	41.1%	73.3%	99.3%	48.0	41.1%	73.3%	99.3%
36.0	31.1%	67.7%	98.9%	36.0	31.1%	67.7%	98.9%
24.0	22.1%	58.0%	97.9%	24.0	22.1%	58.0%	97.9%
12.0	9.7%	36.7%	91.6%	12.0	9.7%	36.7%	91.6%

ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-2 (page 2)

Summary of Percent Losses Paid, Losses Reported and Claims Reported

Months of Development (9)	Percent Losses Paid (10)	Percent Losses Reported (11)	Percent Claims Reported (12)
360.0	100.0%	100.0%	100.0%
348.0	100.0%	100.0%	100.0%
336.0	100.0%	100.0%	100.0%
324.0	100.0%	100.0%	100.0%
312.0	99.9%	100.0%	100.0%
300.0	99.9%	100.0%	100.0%
288.0	99.9%	100.0%	100.0%
276.0	99.8%	100.0%	100.0%
264.0	99.7%	100.0%	100.0%
252.0	99.6%	100.0%	100.0%
240.0	99.4%	100.0%	100.0%
228.0	99.2%	100.0%	100.0%
216.0	98.8%	100.0%	100.0%
204.0	98.4%	100.0%	100.0%
192.0	97.6%	99.9%	100.0%
180.0	96.6%	99.6%	100.0%
168.0	95.2%	97.6%	100.0%
156.0	93.5%	96.2%	100.0%
144.0	91.5%	94.4%	100.0%
132.0	85.6%	91.2%	100.0%
120.0	81.5%	90.3%	100.0%
108.0	74.9%	84.9%	100.0%
96.0	69.8%	80.2%	100.0%
84.0	65.2%	78.9%	100.0%
72.0	60.4%	77.3%	100.0%
60.0	50.0%	75.0%	99.6%
48.0	41.1%	73.3%	99.3%
36.0	31.1%	67.7%	98.9%
24.0	22.1%	58.0%	97.9%
12.0	9.7%	36.7%	91.6%

(2) is from Exhibit WC-2 (page 4).

(3) is from Exhibit WC-2 (page 6).

(4) is from Exhibit WC-2 (page 8).

(6), (7), (8), (10), (11), and (12) are interpolated, based on (2), (3) and (4)

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Historical Limited Paid Losses and Limited Paid Loss Development

I. Historical Limited Paid Losses (\$000)

Claim Period	Months of Development:																				
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	
1995/96																					
1996/97																					
1997/98																					
1998/99																					
1999/00																					
2000/01																					
2001/02				993	1,278	1,396	1,588	1,654	1,720	1,769	1,814	1,859	1,886	1,972	2,015	2,039	2,108				
2002/03			3,116	3,917	4,512	4,973	5,368	5,705	5,940	6,117	6,229	6,308	6,534	6,636	6,709	6,850					
2003/04		1,296	1,626	2,092	2,412	2,691	2,910	3,077	3,291	3,629	3,699	3,807	3,858	4,029	4,226						
2004/05	602	1,759	2,368	2,842	3,172	3,548	3,924	4,139	4,278	4,501	4,600	4,807	4,892	5,140							
2005/06	693	1,518	2,000	2,252	2,730	2,936	3,406	3,527	3,736	3,849	4,181	4,732	6,124								
2006/07	587	1,812	2,591	3,546	4,043	4,759	5,059	5,376	5,692	6,359	6,627	7,843									
2007/08	779	1,798	2,502	3,006	3,796	4,434	4,828	5,106	5,571	6,111	7,570										
2008/09	468	1,706	2,465	3,259	3,837	4,519	4,903	5,347	5,698	7,121											
2009/10	591	2,196	3,473	4,077	4,841	5,578	5,877	6,052	8,087												
2010/11	1,032	2,191	3,301	4,008	4,620	5,198	5,539	7,636													
2011/12	603	1,891	2,433	2,924	3,480	4,550	7,677														
2012/13	696	1,846	3,429	4,845	6,156	7,996															
2013/14	580	2,268	3,457	4,725	7,330																
2014/15	1,411	3,662	4,898	6,780																	
2015/16	2,193	4,683	6,600																		
2016/17	2,409	5,378																			
2017/18	3,421																				

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-2 (page 4)

Historical Limited Paid Losses and Limited Paid Loss Development

II. Limited Paid Loss Development

Claim Period	Months of Development:																			
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252
1995/96																				
1996/97																				
1997/98																				
1998/99																				
1999/00																				
2000/01																				
2001/02				1.286	1.092	1.137	1.042	1.040	1.028	1.025	1.025	1.014	1.046	1.021	1.012				1.034	
2002/03			1.257	1.152	1.102	1.079	1.063	1.041	1.030	1.018	1.013	1.036	1.015	1.011	1.021					
2003/04		1.255	1.287	1.153	1.116	1.081	1.057	1.070	1.103	1.019	1.029	1.014	1.044	1.049						
2004/05	2.924	1.346	1.201	1.116	1.118	1.106	1.055	1.034	1.052	1.022	1.045	1.018	1.051							
2005/06	2.189	1.318	1.126	1.212	1.076	1.160	1.035	1.059	1.030	1.086	1.132	1.294								
2006/07	3.089	1.430	1.369	1.140	1.177	1.063	1.059	1.117	1.042	1.184										
2007/08	2.308	1.392	1.201	1.263	1.168	1.089	1.058	1.091	1.097	1.239										
2008/09	3.645	1.444	1.322	1.178	1.178	1.085	1.090	1.066	1.250											
2009/10	3.714	1.581	1.174	1.187	1.152	1.054	1.030	1.336												
2010/11	2.123	1.507	1.214	1.153	1.125	1.066	1.378													
2011/12	3.134	1.286	1.202	1.190	1.308	1.687														
2012/13	2.653	1.857	1.413		1.271	1.299														
2013/14	3.909	1.525	1.367	1.551																
2014/15	2.595	1.338	1.384																	
2015/16	2.135	1.409																		
2016/17	2.232																			
2017/18																				
Average																				
All	2.819	1.437	1.270	1.219	1.159	1.146	1.087	1.088	1.088	1.065	1.071	1.075	1.039	1.027	1.016				1.034	
Wtd 3	2.282	1.409	1.387	1.358	1.245	1.246	1.166	1.173	1.155	1.126	1.128	1.114	1.034	1.025						
Last 3	2.321	1.424	1.388	1.337	1.244	1.269	1.166	1.164	1.155	1.122	1.120	1.108	1.037	1.027						
Last 5	2.493	1.424	1.322	1.216	1.210	1.080	1.070	1.072	1.089	1.050	1.069	1.023								
x-hi,low																				
Industry																				
Previous	2.536	1.516	1.327	1.204	1.195	1.068	1.059	1.072	1.088	1.048	1.069	1.020	1.016	1.050						
Selected	2.282	1.409	1.322	1.216	1.210	1.080	1.070	1.072	1.089	1.050	1.069	1.023	1.018	1.050						
Cumulative	10.349	4.535	3.218	2.435	2.002	1.655	1.533	1.432	1.336	1.227	1.168	1.093	1.069	1.050						
Percent	9.7%	22.1%	31.1%	41.1%	50.0%	60.4%	65.2%	69.8%	74.9%	81.5%	85.6%	91.5%	93.5%	95.2%						

Amounts exclude 4850 benefits.

Amounts are limited (net of excess insurance).

Data was provided by Corvel.

ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-2 (page 5)

Historical Limited Reported Incurred Losses and Limited Reported Incurred Loss Development

I. Historical Limited Reported Incurred Losses (\$000)

Claim Period	Months of Development:																				
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	
1995/96																					
1996/97																					
1997/98																					
1998/99																					
1999/00																					
2000/01																					
2001/02				1,448	1,788	1,934	2,106	2,137	2,167	2,192	2,209	2,285	2,265	2,564	2,499	2,324	2,345				
2002/03			4,905	5,365	5,890	6,332	6,603	6,937	6,934	7,153	7,529	7,677	7,446	7,520	7,599	7,859					
2003/04		2,384	2,734	2,911	3,200	3,705	3,885	4,108	4,496	4,717	4,778	5,079	4,807	4,664	4,703						
2004/05	1,834	2,996	3,816	4,286	4,400	4,692	4,785	4,833	5,284	5,632	5,369	5,481	6,114	5,891							
2005/06	2,580	3,557	3,849	3,753	4,398	4,394	4,413	4,390	4,759	5,105	5,309	5,666	7,731								
2006/07	2,308	4,080	4,795	5,616	6,358	7,868	7,721	7,673	7,842	8,099	7,986	8,747									
2007/08	3,156	4,009	5,340	5,881	6,773	7,529	7,130	6,584	7,417	7,755	9,373										
2008/09	2,725	3,801	4,523	6,535	6,573	6,387	6,330	6,620	6,809	8,033											
2009/10	3,105	5,763	7,798	8,153	8,067	8,112	7,442	8,092	9,959												
2010/11	3,607	6,753	7,314	7,593	7,730	7,861	7,877	9,630													
2011/12	3,253	5,931	6,182	6,367	6,245	6,681	10,000														
2012/13	3,376	5,604	6,775	8,299	8,810	10,117															
2013/14	4,625	6,487	6,919	7,432	9,988																
2014/15	4,020	7,034	8,744	9,929																	
2015/16	6,025	9,083	10,707																		
2016/17	7,530	11,643																			
2017/18	9,377																				



ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-2 (page 6)

Historical Limited Reported Incurred Losses and Limited Reported Incurred Loss Development

II. Limited Reported Incurred Loss Development

Claim Period	12-24	24-36	Months of Development:		60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	
			36-48	48-60																	
1995/96																					
1996/97																					
1997/98																					
1998/99																					
1999/00																					
2000/01																					
2001/02				1.235	1.081	1.089	1.015	1.014	1.011	1.008	1.034	0.991	1.132	0.975	0.930	1.009					
2002/03			1.094	1.098	1.075	1.043	1.051	1.000	1.031	1.053	1.020	0.970	1.010	1.011	1.034						
2003/04		1.147	1.065	1.099	1.158	1.049	1.057	1.095	1.049	1.013	1.063	0.947	1.008								
2004/05	1.634	1.274	1.123	1.027	1.067	1.020	1.010	1.093	1.066	0.953	1.021	1.116	0.964								
2005/06	1.378	1.082	0.975	1.172	0.999	1.004	0.995	1.084	1.073	1.040	1.067	1.364									
2006/07	1.768	1.175	1.171	1.132	1.237	0.981	0.994	1.022	1.033	0.986	1.095										
2007/08	1.270	1.332	1.101	1.152	1.112	0.947	0.923	1.127	1.045	1.209											
2008/09	1.395	1.190	1.445	1.006	0.972	0.991	1.046	1.029	1.180												
2009/10	1.856	1.353	1.046	0.989	1.006	0.917	1.087	1.231													
2010/11	1.872	1.083	1.038	1.018	1.017	1.002	1.223														
2011/12	1.823	1.042	1.030	0.981	1.070	1.497															
2012/13	1.660	1.209	1.225	1.062	1.148																
2013/14	1.402	1.067	1.074	1.344																	
2014/15	1.750	1.243	1.135																		
2015/16	1.508	1.179																			
2016/17	1.546																				
2017/18																					
Average																					
All	1.605	1.183	1.117	1.101	1.078	1.049	1.040	1.077	1.061	1.037	1.050	1.078	1.019	0.998	0.982	1.009					
Wtd 3	1.580	1.167	1.144	1.133	1.082	1.118	1.124	1.136	1.082	1.082	1.066	1.150	0.984	1.004							
Last 3	1.601	1.163	1.145	1.129	1.078	1.139	1.119	1.129	1.086	1.078	1.061	1.142	0.981	0.998							
Last 5	1.571	1.151	1.083	1.023	1.031	0.980	1.042	1.080	1.061	1.013	1.050	1.026									
x-hi,low																					
Industry																					
Previous	1.541	1.173	1.112	1.024	1.028	1.021	1.016	1.059	1.063	1.010	1.036	1.018	1.014	1.025							
Selected	1.580	1.167	1.083	1.023	1.031	1.021	1.016	1.059	1.063	1.010	1.036	1.018	1.014	1.025							
Cumulative	2.723	1.724	1.478	1.365	1.334	1.294	1.267	1.247	1.178	1.108	1.097	1.059	1.040	1.025							
Percent	36.7%	58.0%	67.7%	73.3%	75.0%	77.3%	78.9%	80.2%	84.9%	90.3%	91.2%	94.4%	96.2%	97.6%							

Amounts exclude 4850 benefits.

Amounts are limited (net of excess insurance).

Data was provided by Corvel.

ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Historical Reported Claims and Reported Claim Development

I. Historical Reported Claims

Claim Period	12	24	Months of Development:		60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240	
			36	48																	
1995/96																					
1996/97																					
1997/98																					
1998/99																					
1999/00																					
2000/01																					
2001/02				130	130	132	132	132	132	132	132	132	132	132	132	132	132				
2002/03			400	401	405	406	406	406	406	406	406	406	406	406	406	406	406				
2003/04		314	318	320	321	322	322	322	322	321	321	321	320	320	320						
2004/05	283	325	331	334	334	336	336	336	337	337	337	337	337	337							
2005/06	347	381	386	389	390	391	391	391	393	393	393	395	395								
2006/07	373	412	415	417	419	420	420	421	422	422	422	422									
2007/08	445	470	472	474	475	476	475	475	475	475	475										
2008/09	431	448	452	451	454	457	458	459	459	459											
2009/10	433	460	465	466	467	467	468	468	469												
2010/11	365	388	389	389	389	391	391	392													
2011/12	435	464	470	471	471	471	471														
2012/13	443	479	481	482	482	483															
2013/14	487	517	523	526	529																
2014/15	348	375	379	382																	
2015/16	402	391	396																		
2016/17	417	449																			
2017/18	447																				

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-2 (page 8)

Historical Reported Claims and Reported Claim Development

II. Reported Claim Development

Claim Period	Months of Development:																			
	12-24	24-36	36-48	48-60	60-72	72-84	84-96	96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252
1995/96																				
1996/97																				
1997/98																				
1998/99																				
1999/00																				
2000/01																				
2001/02				1.000	1.015	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
2002/03			1.003	1.010	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000				
2003/04		1.013	1.006	1.000	1.003	1.003	1.000	1.000	0.997	1.000	1.000	0.997	1.000	1.000						
2004/05	1.148	1.018	1.009	1.000	1.006	1.000	1.000	1.003	1.000	1.000	1.000	1.000	1.000	1.000						
2005/06	1.098	1.013	1.008	1.003	1.003	1.000	1.000	1.005	1.000	1.000	1.005	1.000								
2006/07	1.105	1.007	1.005	1.005	1.002	1.000	1.002	1.002	1.000	1.000	1.000									
2007/08	1.056	1.004	1.004	1.002	1.002	0.998	1.000	1.000	1.000	1.000										
2008/09	1.039	1.009	0.998	1.007	1.007	1.002	1.002	1.000	1.000	1.000										
2009/10	1.062	1.011	1.002	1.002	1.000	1.002	1.000	1.002												
2010/11	1.063	1.003	1.000	1.000	1.005	1.000	1.003													
2011/12	1.067	1.013	1.002	1.000	1.000	1.000														
2012/13	1.081	1.004	1.002	1.000	1.002															
2013/14	1.062	1.012	1.006	1.006																
2014/15	1.078	1.011	1.008																	
2015/16	0.973	1.013																		
2016/17	1.077																			
2017/18																				
Average																				
All	1.070	1.010	1.004	1.003	1.004	1.000	1.001	1.001	1.000	1.000	1.001	0.999	1.000	1.000	1.000	1.000				
Wtd 3	1.041	1.012	1.005	1.002	1.002	1.001	1.002	1.001	1.000	1.000	1.002	0.999	1.000	1.000						
Last 3	1.042	1.012	1.005	1.002	1.002	1.001	1.002	1.001	1.000	1.000	1.002	0.999	1.000	1.000						
Last 5	1.072	1.012	1.003	1.001	1.002	1.001	1.002	1.002	1.000	1.000	1.000	1.000								
x-hi,low																				
Similar																				
Previous	1.069	1.010	1.004	1.002	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000						
Selected	1.070	1.010	1.004	1.003	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000						
Cumulative	1.092	1.021	1.011	1.007	1.004	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000						
Percent	91.6%	97.9%	98.9%	99.3%	99.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%						

Data was provided by Corvel.

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-2 (page 9)

Historical Ratio of Limited Paid Losses and Limited Reported Incurred Losses

I. Ratio of Limited Paid Losses to Limited Reported Incurred Losses

Claim Period	Months of Development:																			
	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	240
1995/96																				
1996/97																				
1997/98																				
1998/99																				
1999/00																				
2000/01																				
2001/02				68.6%	71.4%	72.2%	75.4%	77.4%	79.3%	80.7%	82.1%	81.4%	83.3%	76.9%	80.6%	87.7%	89.9%			
2002/03			63.5%	73.0%	76.6%	78.5%	81.3%	82.2%	85.7%	85.5%	82.7%	82.2%	87.8%	88.2%	88.3%	87.2%				
2003/04		54.4%	59.5%	71.9%	75.4%	72.6%	74.9%	74.9%	73.2%	76.9%	77.4%	75.0%	80.3%	86.4%	89.9%					
2004/05	32.8%	58.7%	62.0%	66.3%	72.1%	75.6%	82.0%	85.6%	81.0%	79.9%	85.7%	87.7%	80.0%	87.2%						
2005/06	26.9%	42.7%	52.0%	60.0%	62.1%	66.8%	77.2%	80.3%	78.5%	75.4%	78.8%	83.5%	79.2%							
2006/07	25.4%	44.4%	54.0%	63.1%	63.6%	60.5%	65.5%	70.1%	72.6%	78.5%	83.0%	89.7%								
2007/08	24.7%	44.8%	46.9%	51.1%	56.1%	58.9%	67.7%	77.6%	75.1%	78.8%	80.8%									
2008/09	17.2%	44.9%	54.5%	49.9%	58.4%	70.8%	77.5%	80.8%	83.7%	88.7%										
2009/10	19.0%	38.1%	44.5%	50.0%	60.0%	68.8%	79.0%	74.8%	81.2%											
2010/11	28.6%	32.4%	45.1%	52.8%	59.8%	66.1%	70.3%	79.3%												
2011/12	18.6%	31.9%	39.4%	45.9%	55.7%	68.1%	76.8%													
2012/13	20.6%	32.9%	50.6%	58.4%	69.9%	79.0%														
2013/14	12.5%	35.0%	50.0%	63.6%	73.4%															
2014/15	35.1%	52.1%	56.0%	68.3%																
2015/16	36.4%	51.6%	61.6%																	
2016/17	32.0%	46.2%																		
2017/18	36.5%																			
Average																				
All	26.2%	43.6%	52.8%	60.2%	65.7%	69.8%	75.2%	78.3%	78.9%	80.6%	81.5%	83.2%	82.1%	84.7%	86.3%	87.4%	89.9%			
Last 3	35.0%	49.9%	55.9%	63.4%	66.3%	71.1%	75.4%	78.3%	80.0%	82.0%	80.8%	87.0%	79.8%	87.3%	86.3%					
Last 5	34.5%	44.2%	48.6%	58.2%	63.2%	69.2%	74.8%	77.2%	78.3%	79.1%	80.8%	84.5%	81.2%							
X-Hi,Low																				
Implicit	26.4%	38.1%	45.9%	56.1%	66.7%	78.1%	82.6%	87.0%	88.2%	90.3%	93.9%	96.9%	97.2%	97.5%						

ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-3 (page 1)

Developed Limited Paid Losses and Limited Reported Incurred Losses

I. Developed Limited Paid Losses

Claim Period (1)	Months of Development 6/30/18 (2)	Limited Paid Losses 6/30/18 (3)	Percent Losses Paid (4)	Developed Limited Paid Losses (3)/(4) (5)
1995/96	276	\$0	99.8%	\$0
1996/97	264	0	99.7%	0
1997/98	252	0	99.6%	0
1998/99	240	0	99.4%	0
1999/00	228	0	99.2%	0
2000/01	216	0	98.8%	0
2001/02	204	2,108,301	98.4%	2,143,593
2002/03	192	6,850,383	97.6%	7,015,385
2003/04	180	4,226,324	96.6%	4,373,266
2004/05	168	5,140,156	95.2%	5,399,323
2005/06	156	6,124,423	93.5%	6,550,185
2006/07	144	7,843,432	91.5%	8,572,057
2007/08	132	7,570,115	85.6%	8,843,593
2008/09	120	7,121,155	81.5%	8,737,614
2009/10	108	8,086,738	74.9%	10,796,712
2010/11	96	7,635,555	69.8%	10,939,191
2011/12	84	7,676,901	65.2%	11,774,388
2012/13	72	7,996,336	60.4%	13,238,967
2013/14	60	7,329,823	50.0%	14,659,645
2014/15	48	6,779,842	41.1%	16,495,966
2015/16	36	6,599,606	31.1%	21,220,599
2016/17	24	5,378,229	22.1%	24,335,876
2017/18	12	3,420,738	9.7%	35,265,344

ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-3 (page 2)

Developed Limited Paid Losses and Limited Reported Incurred Losses

II. Developed Limited Reported Incurred Losses

Claim Period (1)	Months of Development 6/30/18 (2)	Limited Reported Incurred Losses 6/30/18 (3)	Percent Losses Reported (4)	Developed Limited Reported Incurred Losses (3)/(4) (5)
1995/96	276	\$0	100.0%	\$0
1996/97	264	0	100.0%	0
1997/98	252	0	100.0%	0
1998/99	240	0	100.0%	0
1999/00	228	0	100.0%	0
2000/01	216	0	100.0%	0
2001/02	204	2,345,314	100.0%	2,345,504
2002/03	192	7,858,898	99.9%	7,863,144
2003/04	180	4,702,991	99.6%	4,719,983
2004/05	168	5,891,474	97.6%	6,036,346
2005/06	156	7,731,276	96.2%	8,036,669
2006/07	144	8,747,396	94.4%	9,266,309
2007/08	132	9,373,321	91.2%	10,277,765
2008/09	120	8,032,769	90.3%	8,895,647
2009/10	108	9,958,694	84.9%	11,729,911
2010/11	96	9,630,205	80.2%	12,007,737
2011/12	84	10,000,409	78.9%	12,674,789
2012/13	72	10,117,499	77.3%	13,088,615
2013/14	60	9,988,101	75.0%	13,317,468
2014/15	48	9,928,713	73.3%	13,545,310
2015/16	36	10,706,546	67.7%	15,814,692
2016/17	24	11,642,594	58.0%	20,073,438
2017/18	12	9,377,300	36.7%	25,551,225

Sections I and II, (3) are from Exhibit WC-1.

Sections I and II, (4) are from Exhibit WC-2.

ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Developed Limited Paid Losses and Limited Reported Incurred Losses

Footnotes:

Sections I and II, (3) are from Exhibit WC-1.

Sections I and II, (4) are from Exhibit WC-2.

The claim(s) indicated by a "" have been limited in development

(a) through (g) was provided by Corvel.

Claim Number (a)	Date of Loss (b)	Claim Period (c)	Specific Self-Insured Retention (d)	Limited Paid Losses 6/30/18 (e)	Limited Case Reserves 6/30/18 (f)	Limited Reported Incurred Losses 6/30/18 (g)
NONE						

ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-4

Developed Limited Case Reserves

Claim Period (1)	Months of Development 6/30/18 (2)	Percent Losses Paid (3)	Percent Losses Reported (4)	Percent Losses Reserved 6/30/18 (((4)-(3))/ (100.0%-(3)) (5)	Limited Paid Losses 6/30/18 (6)	Limited Case Reserves 6/30/18 (7)	Developed Limited Case Reserves (6)+(7)/(5) (8)
1995/96	276	99.8%	100.0%	100.0%	\$0	\$0	\$0
1996/97	264	99.7%	100.0%	100.0%	0	0	0
1997/98	252	99.6%	100.0%	100.0%	0	0	0
1998/99	240	99.4%	100.0%	100.0%	0	0	0
1999/00	228	99.2%	100.0%	100.0%	0	0	0
2000/01	216	98.8%	100.0%	99.9%	0	0	0
2001/02	204	98.4%	100.0%	99.5%	2,108,301	237,013	2,346,486
2002/03	192	97.6%	99.9%	97.7%	6,850,383	1,008,515	7,882,597
2003/04	180	96.6%	99.6%	89.3%	4,226,324	476,666	4,760,191
2004/05	168	95.2%	97.6%	50.0%	5,140,156	751,319	6,642,793
2005/06	156	93.5%	96.2%	41.5%	6,124,423	1,606,853	9,992,772
2006/07	144	91.5%	94.4%	34.1%	7,843,432	903,964	10,492,981
2007/08	132	85.6%	91.2%	38.9%	7,570,115	1,803,206	12,206,931
2008/09	120	81.5%	90.3%	47.6%	7,121,155	911,614	9,037,617
2009/10	108	74.9%	84.9%	39.8%	8,086,738	1,871,957	12,785,349
2010/11	96	69.8%	80.2%	34.4%	7,635,555	1,994,650	13,427,712
2011/12	84	65.2%	78.9%	39.4%	7,676,901	2,323,508	13,578,950
2012/13	72	60.4%	77.3%	42.7%	7,996,336	2,121,163	12,966,635
2013/14	60	50.0%	75.0%	50.0%	7,329,823	2,658,279	12,646,380
2014/15	48	41.1%	73.3%	54.7%	6,779,842	3,148,871	12,539,733
2015/16	36	31.1%	67.7%	53.1%	6,599,606	4,106,940	14,330,977
2016/17	24	22.1%	58.0%	46.1%	5,378,229	6,264,366	18,971,378
2017/18	12	9.7%	36.7%	29.9%	3,420,738	5,956,561	23,342,126

(3) and (4) are from Exhibit WC-2.

(6) and (7) are from Exhibit WC-1.



ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-5 (page 1)

Preliminary Projected Ultimate Limited Losses to 2017/18

Claim Period (1)	Developed Limited Paid Losses (2)	Developed Limited Reported Incurred Losses (3)	Developed Limited Case Reserves (4)	Preliminary Projected Ultimate Limited Losses (5)
1995/96	\$0	\$0	\$0	\$0
1996/97	0	0	0	0
1997/98	0	0	0	0
1998/99	0	0	0	0
1999/00	0	0	0	0
2000/01	0	0	0	0
2001/02	2,143,593	2,345,504	2,346,486	2,404,568
2002/03	7,015,385	7,863,144	7,882,597	8,111,027
2003/04	4,373,266	4,719,983	4,760,191	4,822,157
2004/05	5,399,323	6,036,346	6,642,793	6,079,304
2005/06	6,550,185	8,036,669	9,992,772	8,177,555
2006/07	8,572,057	9,266,309	10,492,981	9,426,035
2007/08	8,843,593	10,277,765	12,206,931	10,426,263
2008/09	8,737,614	8,895,647	9,037,617	8,890,828
2009/10	10,796,712	11,729,911	12,785,349	11,766,583
2010/11	10,939,191	12,007,737	13,427,712	12,113,166
2011/12	11,774,388	12,674,789	13,578,950	12,675,917
2012/13	13,238,967	13,088,615	12,966,635	13,097,127
2013/14	14,659,645	13,317,468	12,646,380	13,317,468
2014/15	16,495,966	13,545,310	12,539,733	13,733,210
2015/16	21,220,599	15,814,692	14,330,977	16,302,387
2016/17	24,335,876	20,073,438	18,971,378	20,485,102
2017/18	35,265,344	25,551,225	23,342,126	24,446,676

ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-5 (page 2)

Preliminary Projected Ultimate Limited Losses to 2017/18

Footnotes:

(2) and (3) are from Exhibit WC-3.

(4) is from Exhibit WC-4.

(5) is based on (2) to (4), weighted as follows:

Subject to a minimum of Exhibit WC-1, (8) and minimum 25% of case reserves as IBNR, unless all claims are closed

Claim Period	Developed Limited Paid Losses	Developed Limited Reported Incurred Losses	Developed Limited Case Reserves
to 2003/04	30.0%	40.0%	30.0%
2004/05	30.0%	40.0%	30.0%
2005/06	30.0%	40.0%	30.0%
2006/07	30.0%	40.0%	30.0%
2007/08	30.0%	40.0%	30.0%
2008/09	30.0%	40.0%	30.0%
2009/10	30.0%	40.0%	30.0%
2010/11	30.0%	40.0%	30.0%
2011/12	30.0%	40.0%	30.0%
2012/13	30.0%	40.0%	30.0%
2013/14	20.0%	40.0%	40.0%
2014/15	20.0%	40.0%	40.0%
2015/16	20.0%	40.0%	40.0%
2016/17	20.0%	40.0%	40.0%
2017/18	0.0%	50.0%	50.0%

Bornhuetter - Ferguson Analysis

I. A-priori Loss Rate

Claim Period (1)	Preliminary Projected Ultimate Limited Losses (2)	Payroll (000) (3)	Limited Loss Rate per \$100 of Payroll (2)/(3)/10 (4)	Loss Rate Trend (2018/19 = 1.000) (5)	Trended Limited Loss Rate per \$100 of Payroll (4)X(5) (6)	Projected A-priori Loss Rate per \$100 of Payroll (7)/(5) (8)
2013/14	\$13,317,468	\$157,740	\$8.44	1.131	\$9.55	\$9.67
2014/15	13,733,210	157,740	8.71	1.104	9.61	9.91
2015/16	16,302,387	174,138	9.36	1.077	10.08	10.16
2016/17	20,485,102	180,114	11.37	1.051	11.95	10.41
2017/18	24,446,676	185,518	13.18	1.025	13.51	10.67

(7) Projected 2018/19 a-priori loss rate per \$100 of Payroll \$10.94

II. Bornhuetter - Ferguson Analysis Based on Limited Paid Losses

Claim Period (1)	Limited Paid Losses 6/30/18 (2)	Percent Losses Paid (3)	Projected A-priori Loss Rate per \$100 of Payroll (4)	Payroll (000) (5)	B-F Unpaid Losses (100.0%-(3)) X(4)X(5)X10 (6)	B-F Ultimate Limited Paid Losses (2)+(6) (7)
2013/14	\$7,329,823	50.0%	\$9.67	\$157,740	\$7,626,216	\$14,956,038
2014/15	6,779,842	41.1%	9.91	157,740	9,208,255	15,988,097
2015/16	6,599,606	31.1%	10.16	174,138	12,188,718	18,788,324
2016/17	5,378,229	22.1%	10.41	180,114	14,610,130	19,988,359
2017/18	3,420,738	9.7%	10.67	185,518	17,879,959	21,300,697

III. Bornhuetter - Ferguson Analysis Based on Limited Reported Incurred Losses

Claim Period (1)	Limited Reported Incurred Losses 6/30/18 (2)	Percent Losses Reported (3)	Projected A-priori Loss Rate per \$100 of Payroll (4)	Payroll (000) (5)	B-F Unreported Losses (100.0%-(3)) X(4)X(5)X10 (6)	B-F Ultimate Limited Reported Losses (2)+(6) (7)
2013/14	\$9,988,101	75.0%	\$9.67	\$157,740	\$3,813,108	\$13,801,209
2014/15	9,928,713	73.3%	9.91	157,740	4,174,201	14,102,913
2015/16	10,706,546	67.7%	10.16	174,138	5,714,014	16,420,561
2016/17	11,642,594	58.0%	10.41	180,114	7,877,092	19,519,686
2017/18	9,377,300	36.7%	10.67	185,518	12,533,792	21,911,091

Section I, (2) is from Exhibit WC-5.

Section I, (3), Section II, (5) and Section III, (5) were provided by OCFA

Section I, (5) is based on a 2.5% trend.

Section I, (7) is based on Section I, (6) and the following weights

Claim Period	Weight
2013/14	20.0%
2014/15	20.0%
2015/16	20.0%
2016/17	20.0%
2017/18	20.0%
Prior	0.0%

where the prior loss rate = \$10.32  
which was extracted from the previous report)

Sections II and III, (2) are from Exhibit WC-1

Sections II and III, (3) are from Exhibit WC-2

Sections II and III, (4) are from Section I, (8)

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-7

Frequency Times Severity Analysis

I. Projected Ultimate Claims

Claim Period (1)	Months of Development 6/30/18 (2)	Reported Claims 6/30/18 (3)	Percent Claims Reported (4)	Projected Ultimate Claims (3)/(4) (5)
2013/14	60	529	99.6%	531
2014/15	48	382	99.3%	385
2015/16	36	396	98.9%	400
2016/17	24	449	97.9%	459
2017/18	12	447	91.6%	488

II. Frequency Times Severity

Claim Period (1)	Preliminary Projected Ultimate Limited Losses (2)	Projected Ultimate Claims (3)	Average Severity (2)/(3) (4)	Severity Trend (2018/19 = 1.000) (5)	Trended Average Claim Severity (4)X(5) (6)	De-Trended Projected 2018/19 Average Claim Severity (7)/(5) (8)	Frequency Times Severity (3)X(8) (9)
2013/14	\$13,317,468	531	\$25,080	1.312	\$32,895	\$34,736	\$18,445,031
2014/15	13,733,210	385	35,671	1.242	44,316	36,673	14,119,089
2015/16	16,302,387	400	40,756	1.177	47,959	38,717	15,486,991
2016/17	20,485,102	459	44,630	1.115	49,745	40,876	18,762,073
2017/18	24,446,676	488	50,096	1.056	52,888	43,155	21,059,548

(7) Projected 2018/19 average claim severity

\$45,561

Section I, (3) is from Exhibit WC-1.

Section I, (4) is from Exhibit WC-2.

Section II, (2) is from Exhibit WC-5.

Section II, (3) is from Section I, (5).

Section II, (5) is based on a 5.6% trend

Section II, (7) is based on (6) and the following weights

Claim Period	Weight
2013/14	20.0%
2014/15	20.0%
2015/16	20.0%
2016/17	20.0%
2017/18	20.0%

ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-8 (page 1)

Projected Ultimate Limited Losses to 2017/18

Claim Period (1)	Developed Limited Paid Losses (2)	Developed Limited Reported Incurred Losses (3)	Developed Limited Case Reserves (4)	B-F Paid Method Ultimate Losses (5)	B-F Reported Method Ultimate Losses (6)	Frequency Times Severity (7)	Projected Ultimate Limited Losses (8)
1995/96	\$0	\$0	\$0				\$0
1996/97	0	0	0				0
1997/98	0	0	0				0
1998/99	0	0	0				0
1999/00	0	0	0				0
2000/01	0	0	0				0
2001/02	2,143,593	2,345,504	2,346,486				2,404,568
2002/03	7,015,385	7,863,144	7,882,597				8,111,027
2003/04	4,373,266	4,719,983	4,760,191				4,822,157
2004/05	5,399,323	6,036,346	6,642,793				6,079,304
2005/06	6,550,185	8,036,669	9,992,772				8,177,555
2006/07	8,572,057	9,266,309	10,492,981				9,426,035
2007/08	8,843,593	10,277,765	12,206,931				10,426,263
2008/09	8,737,614	8,895,647	9,037,617				8,890,828
2009/10	10,796,712	11,729,911	12,785,349				11,766,583
2010/11	10,939,191	12,007,737	13,427,712				12,113,166
2011/12	11,774,388	12,674,789	13,578,950				12,675,917
2012/13	13,238,967	13,088,615	12,966,635				13,097,127
2013/14	14,659,645	13,317,468	12,646,380	14,956,038	13,801,209	18,445,031	13,518,795
2014/15	16,495,966	13,545,310	12,539,733	15,988,097	14,102,913	14,119,089	14,128,834
2015/16	21,220,599	15,814,692	14,330,977	18,788,324	16,420,561	15,486,991	15,661,987
2016/17	24,335,876	20,073,438	18,971,378	19,988,359	19,519,686	18,762,073	19,462,987
2017/18	35,265,344	25,551,225	23,342,126	21,300,697	21,911,091	21,059,548	21,496,625

ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-8 (page 2)

Projected Ultimate Limited Losses to 2017/18

Footnotes:

(2) and (3) are from Exhibit WC-3.

(4) is from Exhibit WC-4.

(5) and (6) are from Exhibit WC-6.

(7) is from Exhibit WC-7.

(8) is based on (2) to (7), weighted as follows:

Subject to a minimum of Exhibit WC-1, (8) and minimum 25% of case reserves as IBNR, unless all claims are closed

Claim Period	Developed Limited Paid Losses	Developed Limited Reported Incurred Losses	Developed Limited Case Reserves	B-F Paid Method Ultimate Losses	B-F Reported Method Ultimate Losses	Frequency Times Severity
to 2003/04	30.0%	40.0%	30.0%	0.0%	0.0%	0.0%
2004/05	30.0%	40.0%	30.0%	0.0%	0.0%	0.0%
2005/06	30.0%	40.0%	30.0%	0.0%	0.0%	0.0%
2006/07	30.0%	40.0%	30.0%	0.0%	0.0%	0.0%
2007/08	30.0%	40.0%	30.0%	0.0%	0.0%	0.0%
2008/09	30.0%	40.0%	30.0%	0.0%	0.0%	0.0%
2009/10	30.0%	40.0%	30.0%	0.0%	0.0%	0.0%
2010/11	30.0%	40.0%	30.0%	0.0%	0.0%	0.0%
2011/12	30.0%	40.0%	30.0%	0.0%	0.0%	0.0%
2012/13	30.0%	40.0%	30.0%	0.0%	0.0%	0.0%
2013/14	30.0%	40.0%	30.0%	0.0%	0.0%	0.0%
2014/15	30.0%	40.0%	30.0%	0.0%	0.0%	0.0%
2015/16	0.0%	30.0%	30.0%	10.0%	10.0%	20.0%
2016/17	0.0%	20.0%	20.0%	20.0%	20.0%	20.0%
2017/18	0.0%	0.0%	0.0%	40.0%	40.0%	20.0%

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-9

Projected Ultimate Limited Losses for 2018/19 and Subsequent

Claim Period (1)	Projected Ultimate Limited Losses (2)	Payroll (000) (3)	Limited Loss Rate per \$100 of Payroll (2)/(3)/10 (4)	Loss Rate Trend (2018/19 = 1.000) (5)	Trended Limited Loss Rate per \$100 of Payroll (4)X(5) (6)
2013/14	\$13,518,795	\$157,740	\$8.57	1.131	\$9.70
2014/15	14,128,834	157,740	8.96	1.104	9.89
2015/16	15,661,987	174,138	8.99	1.077	9.69
2016/17	19,462,987	180,114	10.81	1.051	11.35
2017/18	21,496,625	185,518	11.59	1.025	11.88
<b>Total</b>	<b>\$84,269,228</b>	<b>\$855,250</b>	<b>\$9.85</b>		<b>\$10.50</b>

Claim Period (1)	Projected Limited Loss Rate per \$100 of Payroll (7)	Projected Payroll (000) (8)	Projected Ultimate Limited Losses (7)X(8)X10 (9)	Present Value Factor (10)	Present Value of Projected Limited Loss Rate per \$100 of Payroll (7)X(10) (11)	Present Value of Projected Ultimate Limited Losses (8)X(11)X10 (12)
2018/19	\$10.50	\$191,084	\$20,063,820	0.89	\$9.35	\$17,866,354
2019/20	10.76	196,817	21,177,458	0.89	9.58	18,855,023
2020/21	11.03	202,721	22,360,128	0.89	9.82	19,907,204
2021/22	11.31	208,803	23,615,579	0.89	10.07	21,026,426
2022/23	11.59	215,067	24,926,233	0.89	10.32	22,194,886

(2) is from Exhibit WC-8.

(3) was provided by OCFA.

(5) is based on a 2.5% trend.

(7) for 2018/19 is based on (6) and the following weights

Claim Period	Weights
2013/14	20.0%
2014/15	20.0%
2015/16	20.0%
2016/17	20.0%
2017/18	20.0%
Prior	0.0%

where the prior loss rate = \$10.32

(7) for 2019/20 and subsequent are based on 2018/19 plus a 2.5% trend

(8) is based on (3) for 2017/18 and a 3% trend

(10) is based on a 2% interest rate and the payout pattern in Exhibit WC-2

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-10

Estimated Outstanding Losses as of June 30, 2018

Claim Period (1)	Limited Paid Losses 6/30/18 (2)	Limited Case Reserves 6/30/18 (3)	Limited Reported Incurred Losses 6/30/18 (4)	Projected Ultimate Limited Losses (5)	Estimated Outstanding Losses 6/30/18 (5)-(2) (6)	Estimated IBNR 6/30/18 (6)-(3) (7)
1995/96	\$0	\$0	\$0	\$0	\$0	\$0
1996/97	0	0	0	0	0	0
1997/98	0	0	0	0	0	0
1998/99	0	0	0	0	0	0
1999/00	0	0	0	0	0	0
2000/01	0	0	0	0	0	0
2001/02	2,108,301	237,013	2,345,314	2,404,568	296,267	59,254
2002/03	6,850,383	1,008,515	7,858,898	8,111,027	1,260,644	252,129
2003/04	4,226,324	476,666	4,702,991	4,822,157	595,833	119,167
2004/05	5,140,156	751,319	5,891,474	6,079,304	939,148	187,829
2005/06	6,124,423	1,606,853	7,731,276	8,177,555	2,053,132	446,279
2006/07	7,843,432	903,964	8,747,396	9,426,035	1,582,603	678,639
2007/08	7,570,115	1,803,206	9,373,321	10,426,263	2,856,147	1,052,941
2008/09	7,121,155	911,614	8,032,769	8,890,828	1,769,673	858,059
2009/10	8,086,738	1,871,957	9,958,694	11,766,583	3,679,845	1,807,888
2010/11	7,635,555	1,994,650	9,630,205	12,113,166	4,477,611	2,482,961
2011/12	7,676,901	2,323,508	10,000,409	12,675,917	4,999,016	2,675,508
2012/13	7,996,336	2,121,163	10,117,499	13,097,127	5,100,791	2,979,628
2013/14	7,329,823	2,658,279	9,988,101	13,518,795	6,188,972	3,530,693
2014/15	6,779,842	3,148,871	9,928,713	14,128,834	7,348,992	4,200,122
2015/16	6,599,606	4,106,940	10,706,546	15,661,987	9,062,381	4,955,441
2016/17	5,378,229	6,264,366	11,642,594	19,462,987	14,084,758	7,820,392
2017/18	3,420,738	5,956,561	9,377,300	21,496,625	18,075,887	12,119,326
<b>Total</b>	<b>\$107,888,057</b>	<b>\$38,145,444</b>	<b>\$146,033,501</b>	<b>\$192,259,756</b>	<b>\$84,371,700</b>	<b>\$46,226,256</b>
& - Amounts at 12/31/17	\$102,762,893	\$35,509,437	\$138,272,329	\$178,327,370	\$75,564,475	\$40,055,038

& - As of 12/31/17, amounts for (2), (3) and (4) reflect no corrections implemented by the TPA. See text for discussion regarding the changes to the data.

The amounts above reflect aggregate reinsurance.

(2), (3) and (4) are from Exhibit WC-1.

(5) is from Exhibit WC-8.



ORANGE COUNTY FIRE AUTHORITY  
 WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-11

Present Value of Estimated Outstanding Losses as of June 30, 2018

Claim Period (1)	Estimated Outstanding Losses 6/30/18 (2)	Present Value Factor (3)	Present Value of Estimated Outstanding Losses 6/30/18 (2)X(3) (4)	Anticipated Future Investment Income (2)-(4) (5)
1995/96	\$0	0.96	\$0	\$0
1996/97	0	0.96	0	0
1997/98	0	0.95	0	0
1998/99	0	0.95	0	0
1999/00	0	0.95	0	0
2000/01	0	0.95	0	0
2001/02	296,267	0.95	281,157	15,110
2002/03	1,260,644	0.95	1,195,091	65,553
2003/04	595,833	0.95	564,850	30,983
2004/05	939,148	0.95	890,312	48,836
2005/06	2,053,132	0.95	1,940,210	112,922
2006/07	1,582,603	0.94	1,490,812	91,791
2007/08	2,856,147	0.95	2,716,196	139,951
2008/09	1,769,673	0.95	1,672,341	97,332
2009/10	3,679,845	0.94	3,470,094	209,751
2010/11	4,477,611	0.94	4,191,044	286,567
2011/12	4,999,016	0.93	4,634,088	364,928
2012/13	5,100,791	0.92	4,687,627	413,164
2013/14	6,188,972	0.92	5,687,665	501,307
2014/15	7,348,992	0.92	6,724,328	624,664
2015/16	9,062,381	0.91	8,246,767	815,614
2016/17	14,084,758	0.90	12,732,621	1,352,137
2017/18	18,075,887	0.90	16,268,298	1,807,589
<b>Total</b>	<b>\$84,371,700</b>		<b>\$77,393,501</b>	<b>\$6,978,199</b>

(2) is from Exhibit WC-10.

(3) is based on a 2% interest rate and the payout pattern in Exhibit WC-2

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-12 (page 1)

Projected Losses Paid July 1, 2018 to June 30, 2023

I. Projected Losses Paid July 1, 2018 to June 30, 2019

Claim Period (1)	Months of Development 6/30/18 (2)	Percent Losses Paid (3)	Months of Development 6/30/19 (4)	Percent Losses Paid (5)	Percent Outstanding Losses Paid 7/1/18 to 6/30/19 ((5)-(3))/ (100.0%-(3)) (6)	Estimated Outstanding Losses 6/30/18 (7)	Projected Losses Paid (6)X(7) (8)	Estimated Outstanding Losses 6/30/19 (7)-(8) (9)	Present Value Factor (10)	Present Value of Estimated Outstanding Losses 6/30/19 (9)X(10) (11)
1995/96	276.0	99.8%	288.0	99.9%	10.0% *	\$0	\$0	\$0	0.96	\$0
1996/97	264.0	99.7%	276.0	99.8%	10.0% *	0	0	0	0.96	0
1997/98	252.0	99.6%	264.0	99.7%	10.0% *	0	0	0	0.96	0
1998/99	240.0	99.4%	252.0	99.6%	10.0% *	0	0	0	0.95	0
1999/00	228.0	99.2%	240.0	99.4%	10.0% *	0	0	0	0.95	0
2000/01	216.0	98.8%	228.0	99.2%	10.0% *	0	0	0	0.95	0
2001/02	204.0	98.4%	216.0	98.8%	10.0% *	296,267	29,627	266,640	0.95	253,308
2002/03	192.0	97.6%	204.0	98.4%	10.0% *	1,260,644	126,064	1,134,580	0.95	1,076,716
2003/04	180.0	96.6%	192.0	97.6%	10.0% *	595,833	59,583	536,250	0.95	508,365
2004/05	168.0	95.2%	180.0	96.6%	10.0% *	939,148	93,915	845,233	0.95	801,281
2005/06	156.0	93.5%	168.0	95.2%	10.0% *	2,053,132	205,313	1,847,819	0.95	1,751,732
2006/07	144.0	91.5%	156.0	93.5%	10.0% *	1,582,603	158,260	1,424,343	0.95	1,346,004
2007/08	132.0	85.6%	144.0	91.5%	10.0% *	2,856,147	285,615	2,570,532	0.94	2,421,441
2008/09	120.0	81.5%	132.0	85.6%	10.0% *	1,769,673	176,967	1,592,706	0.95	1,514,663
2009/10	108.0	74.9%	120.0	81.5%	10.0% *	3,679,845	367,985	3,311,860	0.95	3,129,708
2010/11	96.0	69.8%	108.0	74.9%	10.0% *	4,477,611	447,761	4,029,850	0.94	3,800,149
2011/12	84.0	65.2%	96.0	69.8%	10.0% *	4,999,016	499,902	4,499,114	0.94	4,211,171
2012/13	72.0	60.4%	84.0	65.2%	10.0% *	5,100,791	510,079	4,590,712	0.93	4,255,590
2013/14	60.0	50.0%	72.0	60.4%	10.0% *	6,188,972	618,897	5,570,075	0.92	5,118,899
2014/15	48.0	41.1%	60.0	50.0%	10.0% *	7,348,992	734,899	6,614,093	0.92	6,078,351
2015/16	36.0	31.1%	48.0	41.1%	10.0% *	9,062,381	906,238	8,156,143	0.92	7,462,871
2016/17	24.0	22.1%	36.0	31.1%	10.0% *	14,084,758	1,408,476	12,676,282	0.91	11,535,417
2017/18	12.0	9.7%	24.0	22.1%	10.0% *	18,075,887	1,807,589	16,268,298	0.90	14,706,541
2018/19	0.0	0.0%	12.0	9.7%	9.7% *	20,063,820	1,946,191	18,117,629	0.90	16,305,866
<b>Total</b>						<b>\$104,435,520</b>	<b>\$10,383,361</b>	<b>\$94,052,159</b>		<b>\$86,278,073</b>
					(12) Current liability as of 6/30/18		8,437,170			
					(13) Long term liability as of 6/30/18		75,934,530			
					(14) Total liability as of 6/30/18 (matches exactly to Exhibit WC-10, column(6))		84,371,700			

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-12 (page 2)

Projected Losses Paid July 1, 2018 to June 30, 2023

II. Projected Losses Paid July 1, 2019 to June 30, 2020

Claim Period (1)	Months of Development 6/30/19 (2)	Percent Losses Paid (3)	Months of Development 6/30/20 (4)	Percent Losses Paid (5)	Percent Outstanding Losses Paid 7/1/19 to 6/30/20 ((5)-(3))/ (100.0%-(3)) (6)	Estimated Outstanding Losses 6/30/19 (7)	Projected Losses Paid (6)X(7) (8)	Estimated Outstanding Losses 6/30/20 (7)-(8) (9)	Present Value Factor (10)	Present Value of Estimated Outstanding Losses 6/30/20 (9)X(10) (11)
1995/96	288.0	99.9%	300.0	99.9%	10.0% *	\$0	\$0	\$0	0.97	\$0
1996/97	276.0	99.8%	288.0	99.8%	10.0% *	0	0	0	0.96	0
1997/98	264.0	99.7%	276.0	99.8%	10.0% *	0	0	0	0.96	0
1998/99	252.0	99.6%	264.0	99.7%	10.0% *	0	0	0	0.96	0
1999/00	240.0	99.4%	252.0	99.6%	10.0% *	0	0	0	0.95	0
2000/01	228.0	99.2%	240.0	99.4%	10.0% *	0	0	0	0.95	0
2001/02	216.0	98.8%	228.0	99.2%	10.0% *	266,640	26,664	239,976	0.95	228,217
2002/03	204.0	98.4%	216.0	98.8%	10.0% *	1,134,580	113,458	1,021,122	0.95	970,066
2003/04	192.0	97.6%	204.0	98.4%	10.0% *	536,250	53,625	482,625	0.95	458,011
2004/05	180.0	96.6%	192.0	97.6%	10.0% *	845,233	84,523	760,710	0.95	721,153
2005/06	168.0	95.2%	180.0	96.6%	10.0% *	1,847,819	184,782	1,663,037	0.95	1,576,559
2006/07	156.0	93.5%	168.0	95.2%	10.0% *	1,424,343	142,434	1,281,909	0.95	1,215,250
2007/08	144.0	91.5%	156.0	93.5%	10.0% *	2,570,532	257,053	2,313,479	0.95	2,186,238
2008/09	132.0	85.6%	144.0	91.5%	10.0% *	1,592,706	159,271	1,433,435	0.94	1,350,296
2009/10	120.0	81.5%	132.0	85.6%	10.0% *	3,311,860	331,186	2,980,674	0.95	2,834,621
2010/11	108.0	74.9%	120.0	81.5%	10.0% *	4,029,850	402,985	3,626,865	0.95	3,427,387
2011/12	96.0	69.8%	108.0	74.9%	10.0% *	4,499,114	449,911	4,049,203	0.94	3,818,398
2012/13	84.0	65.2%	96.0	69.8%	10.0% *	4,590,712	459,071	4,131,641	0.94	3,867,216
2013/14	72.0	60.4%	84.0	65.2%	10.0% *	5,570,075	557,008	5,013,067	0.93	4,647,113
2014/15	60.0	50.0%	72.0	60.4%	10.0% *	6,614,093	661,409	5,952,684	0.92	5,470,517
2015/16	48.0	41.1%	60.0	50.0%	10.0% *	8,156,143	815,614	7,340,529	0.92	6,745,946
2016/17	36.0	31.1%	48.0	41.1%	10.0% *	12,676,282	1,267,628	11,408,654	0.92	10,438,918
2017/18	24.0	22.1%	36.0	31.1%	10.0% *	16,268,298	1,626,830	14,641,468	0.91	13,323,736
2018/19	12.0	9.7%	24.0	22.1%	10.0% *	18,117,629	1,811,763	16,305,866	0.90	14,740,503
2019/20	0.0	0.0%	12.0	9.7%	9.7% *	21,177,458	2,054,213	19,123,245	0.90	17,210,921
<b>Total</b>						<b>\$115,229,617</b>	<b>\$11,459,428</b>	<b>\$103,770,189</b>		<b>\$95,231,066</b>

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-12 (page 3)

Projected Losses Paid July 1, 2018 to June 30, 2023

III. Projected Losses Paid July 1, 2020 to June 30, 2021

Claim Period (1)	Months of Development 6/30/20 (2)	Percent Losses Paid (3)	Months of Development 6/30/21 (4)	Percent Losses Paid (5)	Percent Outstanding Losses Paid 7/1/20 to 6/30/21 ((5)-(3))/ (100.0%-(3)) (6)	Estimated Outstanding Losses 6/30/20 (7)	Projected Losses Paid (6)X(7) (8)	Estimated Outstanding Losses 6/30/21 (7)-(8) (9)	Present Value Factor (10)	Present Value of Estimated Outstanding Losses 6/30/21 (9)X(10) (11)
1995/96	300.0	99.9%	312.0	99.9%	10.0% *	\$0	\$0	\$0	0.97	\$0
1996/97	288.0	99.9%	300.0	99.9%	10.0% *	0	0	0	0.97	0
1997/98	276.0	99.8%	288.0	99.9%	10.0% *	0	0	0	0.96	0
1998/99	264.0	99.7%	276.0	99.8%	10.0% *	0	0	0	0.96	0
1999/00	252.0	99.6%	264.0	99.7%	10.0% *	0	0	0	0.96	0
2000/01	240.0	99.4%	252.0	99.6%	10.0% *	0	0	0	0.95	0
2001/02	228.0	99.2%	240.0	99.4%	10.0% *	239,976	23,998	215,978	0.95	205,611
2002/03	216.0	98.8%	228.0	99.2%	10.0% *	1,021,122	102,112	919,010	0.95	873,979
2003/04	204.0	98.4%	216.0	98.8%	10.0% *	482,625	48,263	434,362	0.95	412,644
2004/05	192.0	97.6%	204.0	98.4%	10.0% *	760,710	76,071	684,639	0.95	649,722
2005/06	180.0	96.6%	192.0	97.6%	10.0% *	1,663,037	166,304	1,496,733	0.95	1,418,903
2006/07	168.0	95.2%	180.0	96.6%	10.0% *	1,281,909	128,191	1,153,718	0.95	1,093,725
2007/08	156.0	93.5%	168.0	95.2%	10.0% *	2,313,479	231,348	2,082,131	0.95	1,973,860
2008/09	144.0	91.5%	156.0	93.5%	10.0% *	1,433,435	143,344	1,290,091	0.95	1,219,136
2009/10	132.0	85.6%	144.0	91.5%	10.0% *	2,980,674	298,067	2,682,607	0.94	2,527,016
2010/11	120.0	81.5%	132.0	85.6%	10.0% *	3,626,865	362,687	3,264,178	0.95	3,104,233
2011/12	108.0	74.9%	120.0	81.5%	10.0% *	4,049,203	404,920	3,644,283	0.95	3,443,847
2012/13	96.0	69.8%	108.0	74.9%	10.0% *	4,131,641	413,164	3,718,477	0.94	3,506,524
2013/14	84.0	65.2%	96.0	69.8%	10.0% *	5,013,067	501,307	4,511,760	0.94	4,223,007
2014/15	72.0	60.4%	84.0	65.2%	10.0% *	5,952,684	595,268	5,357,416	0.93	4,966,325
2015/16	60.0	50.0%	72.0	60.4%	10.0% *	7,340,529	734,053	6,606,476	0.92	6,071,351
2016/17	48.0	41.1%	60.0	50.0%	10.0% *	11,408,654	1,140,865	10,267,789	0.92	9,436,098
2017/18	36.0	31.1%	48.0	41.1%	10.0% *	14,641,468	1,464,147	13,177,321	0.92	12,057,249
2018/19	24.0	22.1%	36.0	31.1%	10.0% *	16,305,866	1,630,587	14,675,279	0.91	13,354,504
2019/20	12.0	9.7%	24.0	22.1%	10.0% *	19,123,245	1,912,325	17,210,920	0.90	15,558,672
2020/21	0.0	0.0%	12.0	9.7%	9.7% *	22,360,128	2,168,932	20,191,196	0.90	18,172,076
<b>Total</b>						<b>\$126,130,317</b>	<b>\$12,545,953</b>	<b>\$113,584,364</b>		<b>\$104,268,482</b>

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-12 (page 4)

Projected Losses Paid July 1, 2018 to June 30, 2023

IV. Projected Losses Paid July 1, 2021 to June 30, 2022

Claim Period (1)	Months of Development 6/30/21 (2)	Percent Losses Paid (3)	Months of Development 6/30/22 (4)	Percent Losses Paid (5)	Percent Outstanding Losses Paid 7/1/21 to 6/30/22 ((5)-(3))/ (100.0%-(3)) (6)	Estimated Outstanding Losses 6/30/21 (7)	Projected Losses Paid (6)X(7) (8)	Estimated Outstanding Losses 6/30/22 (7)-(8) (9)	Present Value Factor (10)	Present Value of Estimated Outstanding Losses 6/30/22 (9)X(10) (11)
1995/96	312.0	99.9%	324.0	100.0%	10.0% *	\$0	\$0	\$0	0.98	\$0
1996/97	300.0	99.9%	312.0	99.9%	10.0% *	0	0	0	0.97	0
1997/98	288.0	99.9%	300.0	99.9%	10.0% *	0	0	0	0.97	0
1998/99	276.0	99.8%	288.0	99.9%	10.0% *	0	0	0	0.96	0
1999/00	264.0	99.7%	276.0	99.8%	10.0% *	0	0	0	0.96	0
2000/01	252.0	99.6%	264.0	99.7%	10.0% *	0	0	0	0.96	0
2001/02	240.0	99.4%	252.0	99.6%	10.0% *	215,978	21,598	194,380	0.95	185,244
2002/03	228.0	99.2%	240.0	99.4%	10.0% *	919,010	91,901	827,109	0.95	787,408
2003/04	216.0	98.8%	228.0	99.2%	10.0% *	434,362	43,436	390,926	0.95	371,771
2004/05	204.0	98.4%	216.0	98.8%	10.0% *	684,639	68,464	616,175	0.95	585,366
2005/06	192.0	97.6%	204.0	98.4%	10.0% *	1,496,733	149,673	1,347,060	0.95	1,278,360
2006/07	180.0	96.6%	192.0	97.6%	10.0% *	1,153,718	115,372	1,038,346	0.95	984,352
2007/08	168.0	95.2%	180.0	96.6%	10.0% *	2,082,131	208,213	1,873,918	0.95	1,776,474
2008/09	156.0	93.5%	168.0	95.2%	10.0% *	1,290,091	129,009	1,161,082	0.95	1,100,706
2009/10	144.0	91.5%	156.0	93.5%	10.0% *	2,682,607	268,261	2,414,346	0.95	2,281,557
2010/11	132.0	85.6%	144.0	91.5%	10.0% *	3,264,178	326,418	2,937,760	0.94	2,767,370
2011/12	120.0	81.5%	132.0	85.6%	10.0% *	3,644,283	364,428	3,279,855	0.95	3,119,142
2012/13	108.0	74.9%	120.0	81.5%	10.0% *	3,718,477	371,848	3,346,629	0.95	3,162,564
2013/14	96.0	69.8%	108.0	74.9%	10.0% *	4,511,760	451,176	4,060,584	0.94	3,829,131
2014/15	84.0	65.2%	96.0	69.8%	10.0% *	5,357,416	535,742	4,821,674	0.94	4,513,087
2015/16	72.0	60.4%	84.0	65.2%	10.0% *	6,606,476	660,648	5,945,828	0.93	5,511,783
2016/17	60.0	50.0%	72.0	60.4%	10.0% *	10,267,789	1,026,779	9,241,010	0.92	8,492,488
2017/18	48.0	41.1%	60.0	50.0%	10.0% *	13,177,321	1,317,732	11,859,589	0.92	10,898,962
2018/19	36.0	31.1%	48.0	41.1%	10.0% *	14,675,279	1,467,528	13,207,751	0.92	12,085,092
2019/20	24.0	22.1%	36.0	31.1%	10.0% *	17,210,920	1,721,092	15,489,828	0.91	14,095,743
2020/21	12.0	9.7%	24.0	22.1%	10.0% *	20,191,196	2,019,120	18,172,076	0.90	16,427,557
2021/22	0.0	0.0%	12.0	9.7%	9.7% *	23,615,579	2,290,711	21,324,868	0.90	19,192,381
<b>Total</b>						<b>\$137,199,943</b>	<b>\$13,649,149</b>	<b>\$123,550,794</b>		<b>\$113,446,538</b>

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-12 (page 5)

Projected Losses Paid July 1, 2018 to June 30, 2023

V. Projected Losses Paid July 1, 2022 to June 30, 2023

Claim Period (1)	Months of Development 6/30/22 (2)	Percent Losses Paid (3)	Months of Development 6/30/23 (4)	Percent Losses Paid (5)	Percent Outstanding Losses Paid 7/1/22 to 6/30/23 ((5)-(3))/ (100.0%-(3)) (6)	Estimated Outstanding Losses 6/30/22 (7)	Projected Losses Paid (6)X(7) (8)	Estimated Outstanding Losses 6/30/23 (7)-(8) (9)	Present Value Factor (10)	Present Value of Estimated Outstanding Losses 6/30/23 (9)X(10) (11)
1995/96	324.0	100.0%	336.0	100.0%	10.0% *	\$0	\$0	\$0	1.00	\$0
1996/97	312.0	99.9%	324.0	100.0%	10.0% *	0	0	0	0.98	0
1997/98	300.0	99.9%	312.0	99.9%	10.0% *	0	0	0	0.97	0
1998/99	288.0	99.9%	300.0	99.9%	10.0% *	0	0	0	0.97	0
1999/00	276.0	99.8%	288.0	99.9%	10.0% *	0	0	0	0.96	0
2000/01	264.0	99.7%	276.0	99.8%	10.0% *	0	0	0	0.96	0
2001/02	252.0	99.6%	264.0	99.7%	10.0% *	194,380	19,438	174,942	0.96	167,070
2002/03	240.0	99.4%	252.0	99.6%	10.0% *	827,109	82,711	744,398	0.95	709,411
2003/04	228.0	99.2%	240.0	99.4%	10.0% *	390,926	39,093	351,833	0.95	334,945
2004/05	216.0	98.8%	228.0	99.2%	10.0% *	616,175	61,618	554,557	0.95	527,384
2005/06	204.0	98.4%	216.0	98.8%	10.0% *	1,347,060	134,706	1,212,354	0.95	1,151,736
2006/07	192.0	97.6%	204.0	98.4%	10.0% *	1,038,346	103,835	934,511	0.95	886,851
2007/08	180.0	96.6%	192.0	97.6%	10.0% *	1,873,918	187,392	1,686,526	0.95	1,598,827
2008/09	168.0	95.2%	180.0	96.6%	10.0% *	1,161,082	116,108	1,044,974	0.95	990,635
2009/10	156.0	93.5%	168.0	95.2%	10.0% *	2,414,346	241,435	2,172,911	0.95	2,059,920
2010/11	144.0	91.5%	156.0	93.5%	10.0% *	2,937,760	293,776	2,643,984	0.95	2,498,565
2011/12	132.0	85.6%	144.0	91.5%	10.0% *	3,279,855	327,986	2,951,869	0.94	2,780,661
2012/13	120.0	81.5%	132.0	85.6%	10.0% *	3,346,629	334,663	3,011,966	0.95	2,864,380
2013/14	108.0	74.9%	120.0	81.5%	10.0% *	4,060,584	406,058	3,654,526	0.95	3,453,527
2014/15	96.0	69.8%	108.0	74.9%	10.0% *	4,821,674	482,167	4,339,507	0.94	4,092,155
2015/16	84.0	65.2%	96.0	69.8%	10.0% *	5,945,828	594,583	5,351,245	0.94	5,008,765
2016/17	72.0	60.4%	84.0	65.2%	10.0% *	9,241,010	924,101	8,316,909	0.93	7,709,775
2017/18	60.0	50.0%	72.0	60.4%	10.0% *	11,859,589	1,185,959	10,673,630	0.92	9,809,066
2018/19	48.0	41.1%	60.0	50.0%	10.0% *	13,207,751	1,320,775	11,886,976	0.92	10,924,131
2019/20	36.0	31.1%	48.0	41.1%	10.0% *	15,489,828	1,548,983	13,940,845	0.92	12,755,873
2020/21	24.0	22.1%	36.0	31.1%	10.0% *	18,172,076	1,817,208	16,354,868	0.91	14,882,930
2021/22	12.0	9.7%	24.0	22.1%	10.0% *	21,324,868	2,132,487	19,192,381	0.90	17,349,912
2022/23	0.0	0.0%	12.0	9.7%	9.7% *	24,926,233	2,417,845	22,508,388	0.90	20,257,549
<b>Total</b>						<b>\$148,477,027</b>	<b>\$14,772,927</b>	<b>\$133,704,100</b>		<b>\$122,814,068</b>

ORANGE COUNTY FIRE AUTHORITY  
WORKERS' COMPENSATION - Expected Confidence Level

Exhibit WC-12 (page 6)

Projected Losses Paid July 1, 2018 to June 30, 2023

Footnotes:

Sections I, II, III, IV and V, (3) and (5) are from Exhibit WC-2.

Section I, (7) to 2017/18 is from Exhibit WC-10. The amount for 2018/19 is from Exhibit WC-9

Section II, (7) to 2018/19 is from Section I, (9). The amount for 2019/20 is from Exhibit WC-9.

Section III, (7) to 2019/20 is from Section II, (9). The amount for 2020/21 is from Exhibit WC-9.

Section IV, (7) to 2020/21 is from Section III, (9). The amount for 2021/22 is from Exhibit WC-9.

Section V, (7) to 2021/22 is from Section IV, (9). The amount for 2022/23 is from Exhibit WC-9.

Sections I, II, III, IV and V, (10) are based on a 2% interest rate and the payout pattern in Exhibit WC-2

\* - Limited to a maximum of 10% per actuarial judgment.



Orange County Fire Authority  
**AGENDA STAFF REPORT**

**Human Resources Committee Meeting**  
**November 6, 2018**

**Agenda Item No. 4B**  
**Discussion Calendar**

**FY 2017/18 Human Resources Accomplishments**

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**Contact(s) for Further Information**

Brigette Gibb, Director  
Human Resources (HR)

[brigettegibb@ocfa.org](mailto:brigettegibb@ocfa.org)

714.573.6353

**Summary**

This agenda item is submitted to present the Human Resources Committee with highlights of FY 2017/18 Human Resources Accomplishments.

**Prior Board/Committee Action**

Not Applicable.

**RECOMMENDED ACTION(S)**

Receive and file the report.

**Impact to Cities/County**

Not Applicable.

**Fiscal Impact**

Not Applicable.

**Background**

Human Resources is comprised of four sections: 1) Benefits Administration; 2) Employee & Labor Relations; 3) Recruitment & Selection; and 4) Risk Management. While all four sections provided their customary services, the projects highlighted herein demonstrate accomplishments intended to enhance efficiency, effectiveness, and/or customer service.

**Attachment(s)**

FY 2017/18 Accomplishments



<b>FY 2017/18 ACCOMPLISHMENTS - HUMAN RESOURCES</b>
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<b>EMPLOYEE &amp; LABOR RELATIONS / PROFESSIONAL STANDARDS UNIT</b>
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<b>1</b>	<b>Negotiations and Mediation, including:</b>
	<i>Orange County Employees Association - Negotiated 3-Year Successor MOU (2018-2021)</i>
	<i>Orange County Fire Authority Management Association - Negotiated 3-Year Successor MOU (2018-2021)</i>
	<i>AB 119 New Hire Orientations - Negotiated with All Labor Groups</i>
	<i>Multiple Side Letter Agreements Finalized with COA and 3631</i>
	<i>SB 866 Union Dues - Implemented with All Labor Groups</i>
<b>2</b>	<b>Policy Development / Revisions, including:</b>
	<i>SOP Criminal Records Policy (Collaboration with EMS, HR Staff and FBI Audit Contributor)</i>
	<i>SOP Harassment, Discrimination and Retaliation (Compliance with 2016 AB Regulations)</i>
	<i>GO No Expectation of Privacy (Compliance with FBOR)</i>
	<i>SOP Investigations Policy (One for Safety; One for Non-Safety Personnel)</i>
	<i>HR Policy and Procedure for Probationary Releases</i>
<b>3</b>	<b>Administrative Review / Audit of 6-Month and 1-Year Manipulative Process for Probationary Firefighters, including implementation of recommendations</b>
<b>4</b>	<b>Training and Testing, including:</b>
	<i>New DC and BC Targeted Training on Protected Leaves &amp; Accommodations</i>
	<i>New DC SOP Investigations Policy Training (BC and Captains to Follow)</i>
	<i>Revised Progressive Discipline Training</i>
	<i>Revised BC and Captain Academy Trainings (Three Road Approach)</i>
	<i>Developed New ER Scenarios for Multiple FC and BC Promotional Exams</i>
<b>5</b>	<b>Revised ER Templates, including:</b>
	<i>Performance Improvement Plan 2-Step Process</i>
	<i>Variety of ER Notices</i>
<b>BENEFITS</b>	
<b>6</b>	<b>Transitioned third-party administrator from Zenith-American to HealthEdge for Reserve Firefighter benefits.</b>
<b>7</b>	<b>Leave Administration Activities, Including:</b>
	<i>Developed new notice templates</i>
	<i>Established new leave tracking mechanism for suppression personnel on force-exemption list</i>
	<i>Established method to determine 12-week FMLA/CFRA eligibility based on hours worked in previous 12-months</i>
	<i>Analyzed all applicable policies, MOUs and past practices on leave without pay and benefit impacts</i>
	<i>Developed draft of Federal and State Leave Administration Policy</i>
	<i>Established guidelines and procedures for handling force-exemption list requests</i>

	<i>Researched status of employees currently on non-protected, leave without pay; Established benefit repayment plans, as necessary</i>
8	<b>Transitioned Extra Help Retirement Plan from defined benefit (OCFA-administered) to defined contribution plan (Nationwide administered)</b>
9	<b>Prepared FAQ for Health Care Reimbursement Account (HCRA) Plan Participants to Educate Personnel Hired after 1/1/2007</b>
10	<b>Researched and Analyzed How PEHMCA Benefit is applied to HCRA Plan Participants</b>
11	<b>Prepared Optum EAP Annual Renewal and Contract, including Benefit Enhancements</b>
12	<b>Updated Benefit Summaries in Neogov (Comprehensive Fringe Benefits Summary Associated with Job Announcements)</b>
13	<b>Performed ACA 1095-C Audit Process for Tax Year 2017</b>
14	<b>Established "Employee Married to Employee" Benefit Procedure</b>
15	<b>Updated "Benefits" Section on OCFA.org Website</b>
16	<b>Prepared Full Analysis of Affordable Care Act (ACA) Compliance under OCFA Health Care Agreements.</b>
17	<b>Created "OCERS Compensation Limit Memo" for New Hire Packets</b>
<b>CLASSIFICATION &amp; COMPENSATION</b>	
18	<b>Worked with CPS on several Class Studies, Including Human Resources Professional Class Series, EMS Nurse Education Series, and Community Risk Reduction Salary Compaction Issue</b>
19	<b>Developed New Classification (Communications Services Supervisor)</b>
<b>RECRUITMENT AND SELECTION</b>	
20	<b>Completed Psychological Assessment RFP Process and Established Contract to Incorporate this Pre-Employment Step for all OCFA Safety Positions</b>
21	<b>Completed Occupational Medicine RFP Process to Establish New Contract for Pre-Employment Medical and Fitness-For-Duty Evaluations</b>
22	<b>Worked with Multi-Media Team to Create New Marketing Flyers (Students and Athletes) and OCFA Banner Displays to be used at Job Fairs</b>
23	<b>Worked with Multimedia to Create a Diversity-Themed Recruitment Video</b>
24	<b>Developed a Rater Orientation Training Presentation and Ensured All Raters Involved in the Firefighter Trainee Selection Process Attended</b>
25	<b>Reviewed 16,657 Applications for 96 Selection Processes and Hired 421 OCFA Personnel</b>
26	<b>Attended 18 Collegiate, Military, and Fire Service Job Expos &amp; Career Fairs</b>
27	<b>Developed the Materials for and Facilitated the Human Resources Employee Relations Sections of the Post-Application Fire Captains Academy</b>
<b>RISK MANAGEMENT</b>	
28	<b>Policy Development / Revisions, including:</b>
	<i>Selection, Care, and Maintenance of Protective Ensembles for Structural and Proximity Firefighting</i>
	<i>Respiratory Protection Program</i>
	<i>MultiRae Use During Emergency Incidents</i>

	<i>Vehicle Exhaust Collection Systems</i>
<b>29</b>	<b>Behavioral Health and Wellness Program</b>
	<i>Contracted with Behavioral Health and Wellness Provider</i>
	<i>Conducted Peer Support Team Recruitment</i>
	<i>Trained New Peer Support Team Members</i>
	<i>Conducted Critical Incident Stress Management Team Recruitment</i>
	<i>Trained New Critical Incident Stress Management Team Members</i>
	<i>Conducted Two Significant Other Survival Classes</i>
	<i>Conducted Six Critical Incident Stress Management Debriefings</i>
	<i>Conducted Behavioral Health Training in Chief Officer, Captain, Firefighter, and Dispatcher Academies</i>
	<i>Created Multiple Podcasts and Video Newsletter Segments on Behavioral Health</i>
	<i>Held a OCFA Behavioral Health Conference</i>
<b>30</b>	<b>Cancer Awareness Prevention Program</b>
	<i>Conducted Cancer Awareness Prevention Program Training in All Battalions (86 Presentations)</i>
	<i>Created the Firefighters Attacking the Cancer Epidemic (FACE) Team</i>
	<i>Produced Video Training on Vehicle Exhaust Extraction System Use</i>
	<i>Created Video Training on Gross Field Decontamination</i>
	<i>Created Branding Campaign Including Posters and Strategically Placed Stickers</i>
	<i>Educated Apparatus Specification Committee on Clean Cab Concepts</i>
	<i>Conducted Testing of Ice Machines Installed in Apparatus Bays</i>
<b>31</b>	<b>WEFIT Program</b>
	<i>Contracted with Hoag Executive Health to Provide WEFIT Medical Evaluations</i>
	<i>Revised the Medical Protocols for WEFIT Exams to Include a Behavioral Health Screening, Carotid Artery Scan, and Skin Cancer Evaluation</i>
	<i>Created an Urban Search and Rescue (USAR) Team Post-Deployment Medical Evaluation Process</i>
	<i>Rebranded the WEFIT Program</i>
	<i>Created a WEFIT Video Newsletter Segment and Podcast</i>
	<i>Identified a Electrolyte Replacement to Reduce the Risk of Heat Illness/Dehydration</i>
<b>32</b>	<b>Environmental, Health, and Safety Program</b>
	<i>Hired Environmental, Health, and Safety Specialist</i>
	<i>Conducted Bi-Monthly Occupational Safety and Health Committee Meetings</i>
	<i>Participated in the Great California ShakeOut Earthquake Drill</i>
	<i>Increased Compliance of the Aboveground/Underground Fuel Storage Tank Program</i>
	<i>Transitioned Aboveground/Underground Fuel Storage Tank Inspections From a Contractor to In-House Personnel</i>
	<i>Increased Compliance of the Spill Prevention Control and Countermeasures Program</i>

	<i>Transitioned Emergency Generator Permitting From Property Management to Risk Management</i>
	<i>Conducted Review of Hazardous Materials Management Program</i>
	<i>Conducted Emergency Action Plan Training and Evacuation Drill for the Regional Fire Operations and Training Center</i>
	<i>Participated in the Great California ShakeOut Earthquake Drill</i>
	<i>Conducted Review of the Live Fire Training Program</i>
<b>33</b>	<b>General Liability/Insurance Program</b>
	<i>Hired Risk Management Analyst to Manage the General Liability/Insurance Program</i>
	<i>Implemented Certificate of Insurance Tracking Software</i>
	<i>Implemented Assetworks Software for Tracking Vehicle Accidents</i>
<b>34</b>	<b>Workers' Compensation Program</b>
	<i>Conducted Quarterly Onsite Occupational Clinic Reviews</i>
	<i>Conducted Quarterly Traveler Claims Audits (Pre-Self-Insurance Claims)</i>
	<i>Conducted Quarterly Third Party Administrator Claims Audits</i>
	<i>Interview Legal Firms and Added One Firm to Our Attorney Panel</i>
<b>MISC.</b>	
<b>35</b>	<b>Prepared Garden Grove Transition FAQs for Personnel, Analysis for Pre-Employment/Onboarding Costs, and Needs Assessment</b>