



 Association of Bay Area Governments

Risk Management Committee  
Regular Meeting  
**AGENDA**  
October 16, 2013  
10:30am–1:00pm

101 Eighth Street  
Oakland, CA 94607  
Conference Room B

1. Call to Order
2. Public Comments
3. Approval of Minutes – April 10, 2013 - **(Action)**
4. Plan Program Performance Highlights – **(Information)**
  - a. Staff will provide an update on PLAN loss trends and major loss causes.
5. Risk Management Program Update – **(Information)**
  - a. Staff will provide an overview of the Risk Management Best Practices Risk Assessment Project; Phase 2. Discussion to include a review of project outcomes and outstanding issues.
6. Risk Management Grant Program Funding – **(Information/Action)**
  - a. PLAN Staff will provide an update on member grant fund utilization.
7. Risk Management Training Program – **(Information)**
  - a. Staff will provide update on Risk Management Training program.
8. Insurance Program – **(Information)**
  - a. PLAN Staff will provide a report on the EQ PML study and preliminary report from AMWINS.
  - b. PLAN Staff will provide a report on SIR program options (buydown)
  - c. PLAN Staff will provide a report on SIR study (PLAN Members)
9. Other Business – PLAN Updates; Risk Console (RMIS Exploratory); Board Retreat
10. Adjourn

# **AGENDA ITEM**

## **#3**

Approval of Minutes – April 10, 2013



Association of Bay Area Governments

## ABAG PLAN Corporation

### Risk Management Committee Meeting Summary of Minutes

April 10<sup>th</sup>, 2013

101 8<sup>th</sup> Street  
Oakland, CA 94607  
Conference Room B  
&

#### Teleconference Locations Below:

Participant	Member City	Street Address
LeeAnn McPhillips	Gilroy	7351 Rosanna St.
Leslie Jensen	Morgan Hill	17575 Peak Ave.

**Presiding**

**Mike Taylor**

**Saratoga**

**Members Present:**

LaRae Brown  
Julie Carter  
Brian Dossey  
Rebecca Mendenhall  
Manuel Sandoval  
LeeAnn McPhillips  
Leslie Jensen

Millbrae  
Dublin  
Colma  
San Carlos  
Millbrae  
Gilroy  
Morgan Hill

**Staff Present:**

James Hill, PLAN Risk Management Officer  
Kim Chase, PLAN Administrative Assistance  
Gertruda Luermann, Risk Analyst

**Risk Consultant:**

Jeff Johnston

Bickmore

**1. Call To Order:**

Meeting was called to order at 10:35 am by Mike Taylor. A quorum was present.

**2. Public Comments:**

None

**3. Approval of Minutes, Meeting of October 17, 2012:**

Minutes were approved as presented; /M/Dossey/S/Carter/C/unanimously approved

**4. Plan Program Performance Highlights -**

Staff (Jim Hill) presented the PLAN Management Data Report (MDR) for all members and reviewed claims frequency, severity for the current fiscal year, as well as, five year trending of Liability claims.

Claim frequency continues to decline on a year to year basis over the past five years. GL open claims inventory at year end was 463. Total open claims, including Property are 570. Over the past five years, Public Works is responsible for 62% of all claims. Public Safety accounts for 20% of all claims and Parks/Rec account for 14% of all claims. For the past full fiscal year, 46% of claims were related to public works, 22% in Parks/Rec and 20% in Public Safety. Total incurred claims by dollar show a declining trend, however, there was a notable increase in 2010/2011 to \$16 million (incurred claims). This anomaly was attributable to three significant claims related to pedestrians and bicyclist accidents. Staff summarized by noting that Public Works, Safety, and Parks/Recs continue to be the primary contributors both in frequency and incurred loss. Staff discussed the Risk Control programs in place to control loss frequency. Staff also noted that 93% of Police claims are a result of improper or excessive use of force, false arrest and violation of constitutional rights allegations. 56% of Parks and Recs claims are related to trees. Staff emphasized continued use of best practices which include maintenance programs, risk assessments and periodic inspections. Staff also emphasized continual training of our Law Enforcement agencies with respect to pursuit protocol, warrantless searches and TASER.

**5. Risk Management Program Update -**

a. Jeff Johnston, Risk Control Director with Bickmore expressed his appreciation for the MDR reports and scorecards, however he needs more “clarity” on the data to help address loss drivers. Jeff wants member feedback amplified and wants to spend more time addressing loss drivers to further identify the primary contributors. Bickmore’s previous assessments looked at the big picture; however going forward Bickmore is going to concentrate efforts on focal areas at the PLAN member level to ensure implementation of strategic goals and best practices activity as they relate managing frequency at the member level. Staff (J Hill) mentioned that Risk Management is a practice and we need to continually “revisit and refresh” Risk Management processes, procedures and internal documentation.

Mike Taylor suggested that PLAN review, revise and update the Risk Management manual, as it is a critical piece. He also suggested member cities outline their goals in a charter or policy, therefore members can be held more accountable for implementation. He did note, however, the importance of flexible assessments. Phase 2 will begin in FY 2013/14. Jeff J. wants to spread the word on grant funding for risk management activities and the usage of MDR’s for phase 2 planning. Phase 2 assessment areas will include Sidewalks, Street and Road Maintenance, Urban Forest Management, Contractual Risk Transfer, and Aquatics Programs. Staff (Jim Hill) suggested the utilization of temps, volunteers or interns to assist with the inventory and assessments and used Gilroy as an example. Staff anticipates longer term planning and longer project durations are needed to establish measurable goals, objectives and priorities. 2 to 3 year plans may be required for the satisfactory completion of some longer term goals (capital improvement; sewers/sidewalks, etc.).

b. Gertruda Luermann discussed the Risk Management framework assessments, including scorecards for each city, and the risk management goals matrix. She reported that risk assessments have been completed by all members with the exception of Benicia, Foster City and Woodside which is being scheduled this month. Consultants are having trouble scheduling these meetings with the member cities as resources are stretched. Next year's goals will include outstanding framework best practices, the new reassessment, and loss drivers based on observed needs. Jim Hill spoke about consultant hours, as problem solving hours, rather than assessment hours.

**6. Risk Management Grant Program Funding:** Staff (Jim Hill) discussed member grant funding and informed the committee that \$1.829 was allocated for last fiscal year's funding and 68% of grants were utilized. For the current fiscal year, 18% of grant funding has been used. Grant expenditures were primarily used for member cities Best Practices consulting, Risk Management programs and Police grants. Jim wants to maximize fund distribution, to help with the elimination of loss drivers. Gertruda reviewed the proposed 2013/2014 grant budget noting that the calculation is based on 2012/2013 premiums and contemplate a 10% rate increase. Service credits will remain at 4% of premium. Training grants will stay at a fixed rate of \$5000 per member. The cities risk management program grant will be kept at 10% of premium and the police grants will be at \$15,000 per member with police. Grant funding will be capped at 20% of premium.

As a follow up to the 2012 Risk Management Committee meeting, Grant funding approval is going to be withheld until member city reaches its planned goals; however, Jim assured needed flexibility, and differentiation between short and long term goals. He stated that fiscal year funding is only carried over for 90 days. Jim recommended a motion to recommend the approval of the grant funding levels to the BOD as presented with the caveat of withholding grant fund allocation until members complete their risk management re-assessments.

/M/Brown/S/Dossey/C/unanimously approved.

7. **Risk Management Training Program:** Gertruda presented the committee with the RM training schedule. Of note, Defensive Driving Training classes are scheduled on 4/23, and 5/21; Insurance Requirements training on 5/23, and Sewer Response Training on 6/6. PLAN trainings are also going to focus on Mandated Reporter Training. Jim handed out a current event article involving an incident of alleged sexual abuse in Walnut Creek and he emphasized the importance of mandatory reporting as it pertains to statutory regulations.
8. **Insurance Program:** Jim thanked everyone for keeping their property schedules up to date and for providing all of the necessary underwriting information. He noted the complexity of estimating the value of art. He is recommending that members incorporate appraisals of high valued art and artifacts insured and determine an agreed amount for insurance purposes. This will eliminate any potential disputes over valuation of art pieces should a claim arise. He briefly touched on the PML study and the Hazard Mitigation plan.
9. **Other Business:** Committee Member Nominations: Jim provided a spreadsheet showing which member cities are involved in PLAN committees. Jim appreciates committee support from participating member cities; however PLAN needs more involvement from members on committee assignments. Julie Carter reminded Jim to incorporate and reach out to the City Manager's to encourage committee member involvement. The committee also discussed required board member resolutions when changes to board members occur. Kim will send committee members a sample resolution template to member cities.

The Risk Management committee nominated Mike Taylor as the Chairman of the committee for the next fiscal year. Mike accepted the nomination and a roll call vote was taken.  
/M/Carter/S/Dossey/C/unanimously approved.

Committee member LaRae Brown from Millbrae announced that she is retiring and this would be her last committee meeting. She introduced her replacement at the city and informed the group that her replacement will serve on the Risk Management committee. The group welcomed the newest member of the Risk Management committee, Mr. Manual Sandoval.

**10. Meeting was adjourned at 1:10 pm by Mike Taylor**

Respectfully Submitted,

Jim Hill,  
Risk Management Officer/PLAN Secretary

DRAFT

# AGENDA ITEM

## #4

Plan Program Performance Highlights



Association of Bay Area Governments

Date: October 16, 2013  
To: Risk Management Committee  
From: Jim Hill, PLAN Risk Management Officer  
Subject: **ABAG PLAN Update on Self Insured Liability Program**

### **Action Required**

This report is for informational purposes only. No action required.

### **Overview**

Report is being provided to assist the Committee in evaluating PLAN program performance as it pertains to the allocation of Risk Management grant funding and corresponding impact to loss frequency/ severity and program surplus.

### **Claim Frequency and Severity**

PLAN claim frequency (number of claims) has demonstrated a notable downward trend since FY 2007-08. The decline in claim frequency began showing signs of leveling in FY2011-12. Claim frequency as measured by current claim intake has shown a slight uptick. Claim incident reporting has improved but latent claims still exist and make it difficult to predict if there will be a significant reversal in the current trend.

In FY 2012-13, PLAN handled 469 General Liability/Auto Liability claims with a net incurred value of \$7,263,802. Net incurred value includes subrogation, salvage and miscellaneous recoveries. The average incurred value per claim is \$15,488. PLAN average incurred claim values spiked in FY2009-10 but are showing a declining trend since FY2010-11.

Claim cause of loss pattern continues its clearly identifiable distribution. Based on claim count, claims are being driven primarily by Public Works (46%), Public Safety (27%) and Parks/Recreation (22%). In terms of incurred values, claims costs are being driven by Public Works (59%), Public Safety (30%) and Parks/Recreation (9%). We have had an increase in severity claims related to pedestrian accidents and auto/pedestrian accidents.

### **Expected Loss Trend**

PLAN Liability Program's expected liability for outstanding claims as of June 30, 2013 is \$35,467,000 a decrease of \$531,000 from the original estimate provided by our actuaries at the June Board meeting. As noted in the Actuarial report presented at the board meeting, PLAN expected liabilities have increased approximately 51% (\$11,975,000) from prior year (June 30, 2012). Two cases had a significant impact on PLAN results for FY2012-13. PLAN expected liabilities include loss/loss adjustment expense and have been discounted for investment income at 3% (versus 4% in the prior year).

### **ABAG PLAN Update on Self Insured Liability Program (con't)**

Actual incurred loss development was significantly less than anticipated in the preliminary actuarial report (June 2013). The earlier report suggested that incurred losses would increase by \$2,180,000. Actual incurred losses actually decreased by \$2,754,000 which was \$4,934,000 less than anticipated. This was a result of a decrease in incurred loss for one large claim in particular.

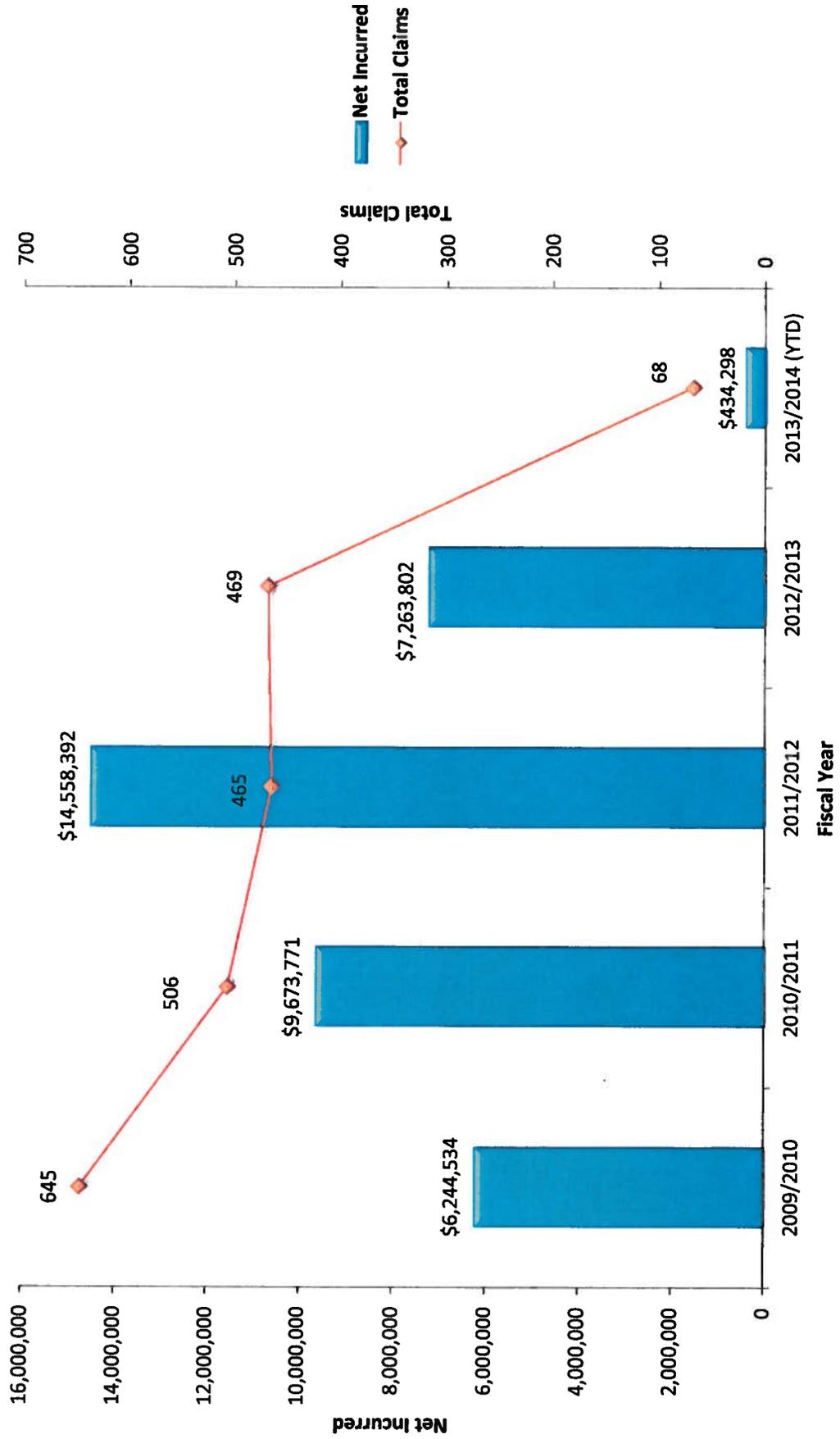
### **Summary**

The Risk Management Committee will continue to monitor claim frequency and loss development to evaluate the impact to member surplus. This action will ensure that corresponding annual grant funding allocations recognize and reflect existing loss trends, as well as, PLAN program loss development.

# ABAG Plan General Liability and Auto Liability Claims

Fiscal Year 2009/2010 - 2013/2014(YTD)

(Valuation as of 10/12/2013)

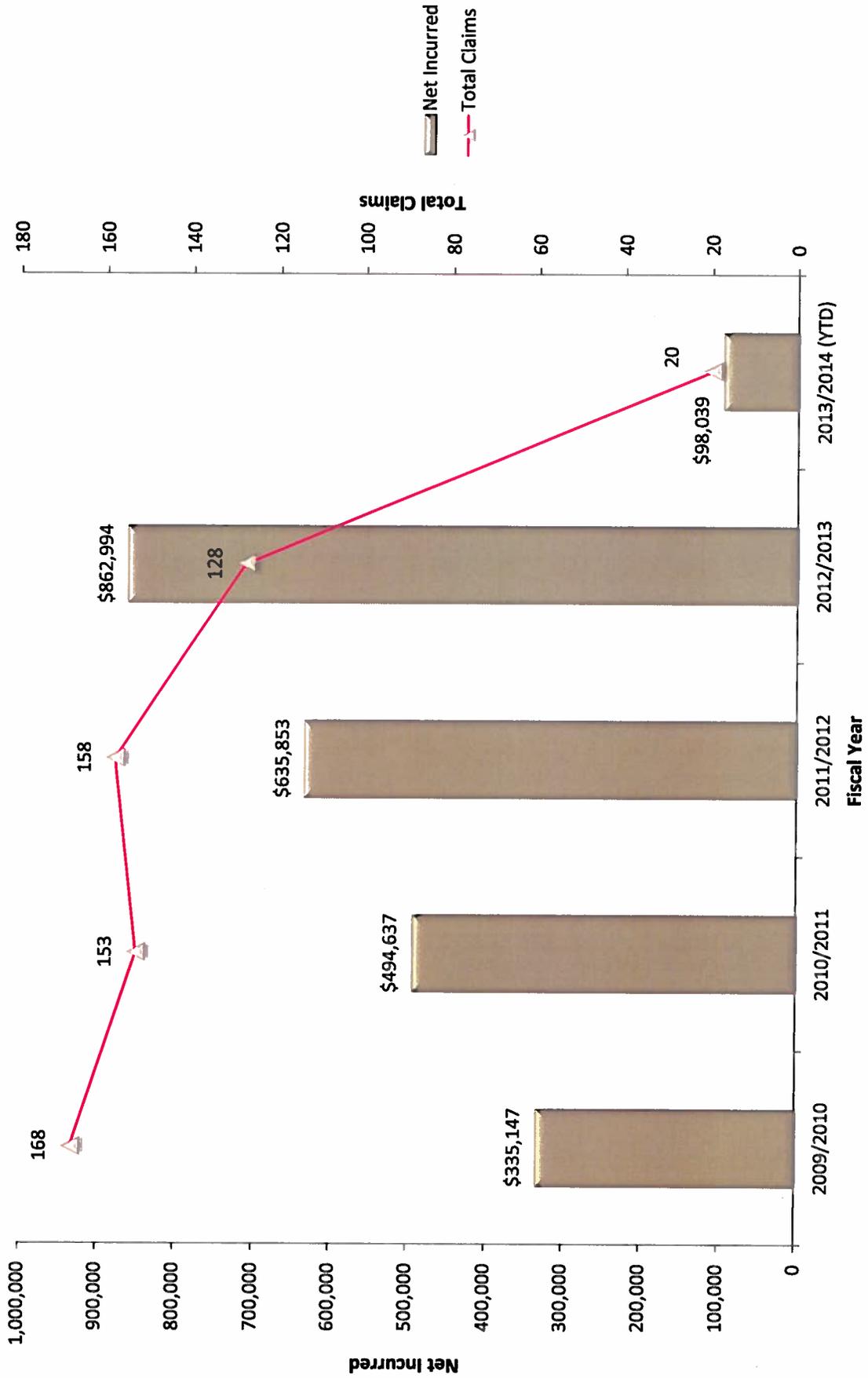


# ABAG Plan Property Claims

(PD Building, Traffic Light, etc AND PD Auto Physical Damage)

FY 2009/2010 - 2013/2014 (YTD)

(Valuation as of 10/12/2013)



# AGENDA ITEM

## #5

Risk Management Program Update



**Staff Report**

**Date:** October 16, 2013  
**To:** Risk Management Committee  
**From:** Gertruda Luermann  
**Re:** Risk Management Program Update –

---

As of to date, consultants have met with members or are in the midst of setting up meetings to go over this year's Best Practices Re-Assessment and to set up a strategic risk management plan. We have asked members and consultants to have the Re-assessment completed by no later than November with goals being set and implementation underway. About half of the members have met with their consultants and have started goal setting and working towards implementation. For the remaining members, meetings have either been scheduled or are being currently scheduled. So far, participation by members has been positive again and is encouraging. Staff also received positive feedback from members regarding their consultants.

As has been discussed by the Committee, risk management goals can be completed over a 2 to 3 year period as long as milestones are being completed, and most members are making steady progress on their goals. About 40% of the goals set so far consist of carry over goals from last year. These goals are either loss driven or are addressing outstanding non-compliance issues as a result of last year's assessment.

As a result, PLAN's Masters Scorecard shows lots of yellow and red. Best Practices that were re-assessed last year are yellow and, as mentioned, outstanding issues have turned into goals of this year. Many outstanding issues from last year's audit are due to lack of documentation demonstrating practice is in place and will be worked on over time. Of course, Best Practices to be reassessed this year are set to red.

All but two members have completed last year's Re-Assessment, and a couple members have been unresponsive. It has been agreed that starting with this year, we will withhold grant payments unless progress has been shown, and staff will send out reminders after November to that effect. Results thereof remain to be seen and will be reported at the next committee meeting.

ABAG PLAN Risk Management Committee  
Risk Management Program Update

Staff has updated the Risk Management Manual on the PLAN website. Various format changes were made to ease maneuvering the Manual. An updated TOC with better page numbering and direct page links was included as well as replacing some information with updated information or direct links to respective websites. The Best Practices that are also imbedded within the manual continue to be updated on an ongoing basis.

# **AGENDA ITEM**

## **#6**

Risk Management Grant Program Funding



**Date:** October 16, 2013  
**To:** Risk Management Committee  
**From:** James Hill, PLAN Risk Manager  
**Subject:** Risk Management Program Fund Utilization

**Action Required**

None. This report is for informational purposes.

**Overview**

Staff will provide an update on PLAN Risk Management Grant funding and grant expenditures for FY 2012-13 including current fiscal year to date. Committee members will review and discuss Grant Program Utilization Reports and accompanying charts/graphs.

**Highlights**

In FY 2012-13 PLAN allocated \$1,829,472 in total funding for all Risk Management programs. This figure includes specific funding for Training (\$195K), Defensive Driving (\$40K) and Sewer Loss Prevention (\$60K).

For FY 2012-13, PLAN members used \$1,266,098 (69%) of allocated grant funds. PLAN grant funds were heavily utilized in Risk Management Programs, Police Grants and Best Practices Consultation. They ranked as follows:

- |                                |                 |
|--------------------------------|-----------------|
| 1. Risk Management Programs    | \$752,330 (59%) |
| 2. Police Risk Management      | \$242,628 (19%) |
| 3. Best Practices Consultation | \$172,232 (14%) |

The processing deadline for grant funding requests for FY 2012-13 was September 30<sup>th</sup>. As of October 12, 2013, 62% of PLAN members (18) used at least 80% of their allocated grant funds. 45% of PLAN members (13) utilized at least 85% of allocated grant funds. It is notable that 7 members used less than 50% of their allocated funding.

In FY 2013-14 PLAN allocated \$787,218 in total funding for all Risk Management programs, a significant reduction (57%) from prior year. Funding includes specific allocations for Training (\$70K), Defensive Driving (\$20K) and Sewer Loss Prevention (\$25K).

## **Risk Management Program Fund Utilization (con't)**

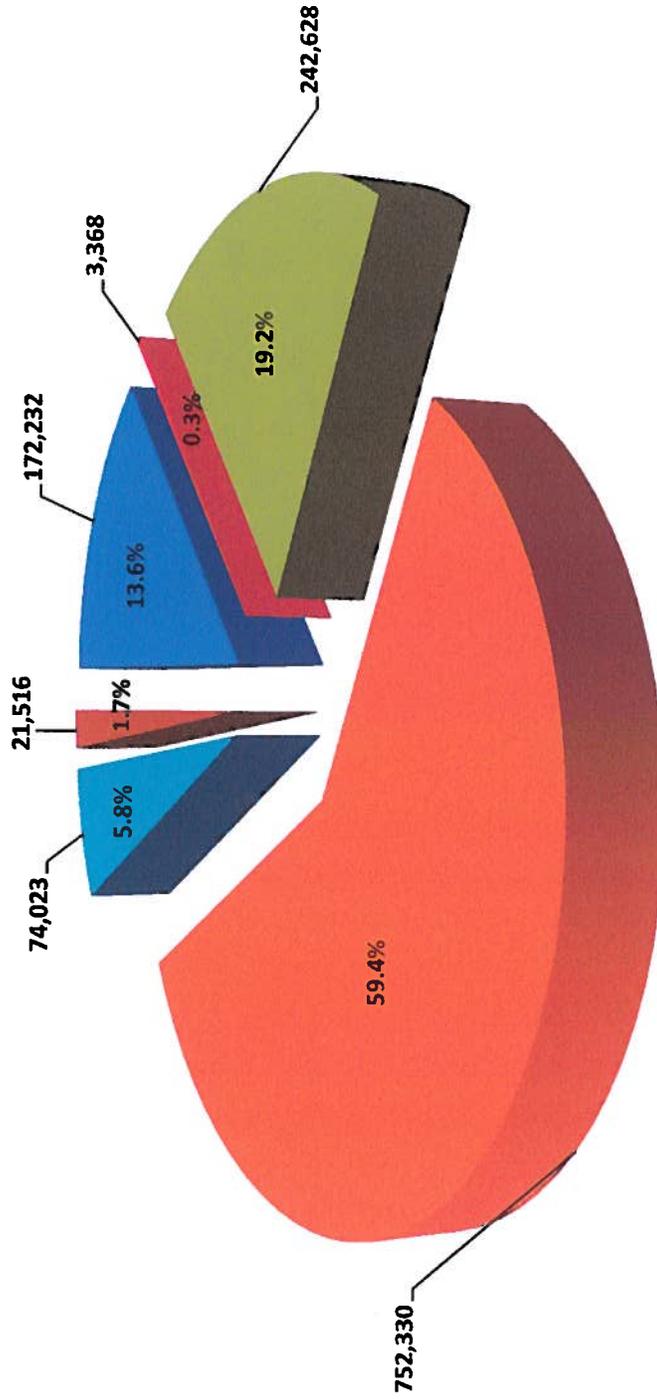
### **Summary**

The ABAG PLAN grant program was impacted significantly in FY 2013-14 due to the erosion in surplus caused by recent severity claims. Members authorized an additional funding contribution of \$330K which mitigates some of the impact. This clearly demonstrates that PLAN members are willing to continue their investment in the program.

In FY 2013-14, PLAN members will work closely with our Loss Control consultants updating their strategic plan(s) with a focus on our Phase II Re-Assessments. Risk Management staff will also provide ongoing support to each member during Phase II Re-Assessment planning stages. PLAN staff and member agencies will evaluate ways to reduce loss frequency through strategic implementation of grant funded loss control/loss reduction activities. Planning will be extremely important in ensuring optimal utilization of member funding for all members.

**FY 2012-2013 ABAG Plan Grant Program  
Funds Usage by Category**

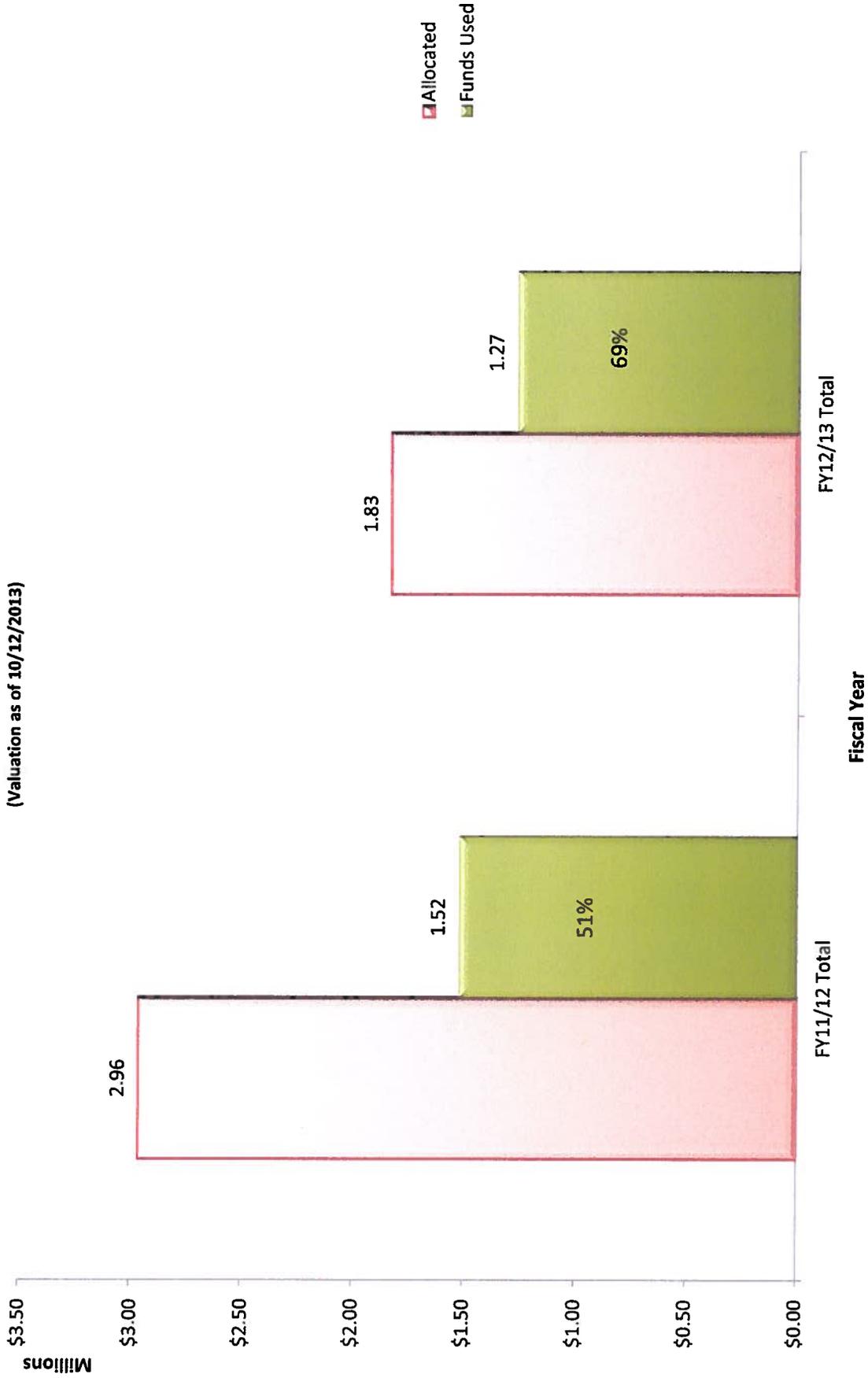
Total Grant Funds Used: \$1,266,097.63  
(Valuation as of 10/12/2013)



- Best Practice
- Defensive Driving
- Police Risk Management
- Risk Management Programs
- Risk Management Training
- Sewer Loss

# ABAG Plan Grant Program

Total Funds Allocated vs Total Funds Used by Fiscal Year  
(Valuation as of 10/12/2013)



# AGENDA ITEM

## #7

Risk Management Training Program



 Association of Bay Area Governments  
**ABAG PLAN CORPORATION**  
101 - 8th Street  
Oakland, CA 94607-4756

**Staff Report**

**Date:** October 16, 2013  
**To:** Risk Management Committee  
**From:** Gertruda Luermann  
**Re:** Risk Management Program Update – Training Program

---

Attached you will find a planned Training Calendar.

For this program year, the focus will be on training relating to some of this year's Re-Assessment Best Practices, i.e. Sidewalk Program and Urban Forest Management. We will have mini-forums with a panel of presenters who will address various issues on those two subjects. We will also shift the focus of the Insurance Requirements in Contracts (IRIC) workshop to certificates and endorsements.

The remainder of workshops will address ongoing or arising concerns, and staff is taking requests or recommendations throughout the year. Regularly occurring workshops, such as the Defensive Driving Course, will continue to be rotated throughout the various Bay Areas.

# ABAG PLAN

## 2013-14 Training Calendar

<i>November</i>			
11/20/2013	<b>Workplace Violence</b>	Newark	
<i>December</i>			
12/9/2013	<b>Defensive Driving</b>	San Carlos	
12/12/2013	<b>Sewer Response Regulations &amp; Requirements Update</b>	Oakland	
<i>January</i>			
Tbd – 1/9/2014	<b>Sidewalk Liability Forum</b>	Oakland	
<i>February</i>			
Tbd	<b>Search Warrants &amp; Unlawful Arrests</b>	Burlingame	
Tbd	<b>Defensive Driving</b>	Tbd - Milpitas	

***March***

3/13/2014	<b>Urban Forest Management Forum</b>	Oakland
Tbd	<b>Insurance Requirements in Contracts</b>	Tbd – <i>San Bruno</i>

***April***

Tbd	<b>Hazardous Recreational Activities, incl Skateboard Parks</b>	Tbd – <i>SSF</i>
Tbd	<b>Defensive Driving</b>	Tbd – <i>Benicia</i>

***May***

Tbd	<b>Substance Abuse for Supervisors under DOT Regulations</b>	Tbd - <i>Gilroy</i>
-----	--	---------------------

***June***

Tbd	<b>Tbd Coaching Van Drivers – Hazard Investigation &amp; Root Cause Analysis - Government Claims Act</b>
-----	--

# AGENDA ITEM

## #8

Insurance Program



Date: October 16, 2013

To: Risk Management Committee

From: Jim Hill, PLAN Risk Management Officer

Subject: **ABAG PLAN PML Study – Catastrophic Risk Summary**

### **Action Required**

This report is for informational purposes only. No action is required at this time.

### **Overview**

This report is being provided as a means to assist the RMC and PLAN staff in evaluating PLAN exposure to catastrophic loss from an Earthquake. The existing PLAN Property MOC and XS insurance program contain notable exclusions for the peril of Earthquake. The report and findings will be used to assess PLAN probable maximum loss (PML) in a variety of earthquake scenarios. The data will also be used to determine if optional placement of insurance coverage is warranted for select PLAN member property locations in high EQ vulnerability geographical areas.

### **Highlights**

ABAG enlisted the support of Alliant to conduct a study of PLAN Probable Maximum Loss for the peril of Earthquake. AmWins Group partnered with Alliant to perform a catastrophic Risk Summary and a report has been prepared for ABAG PLAN. The report is attached for your review.

The study looks at PLAN exposure to property losses based on a series of Earthquake assumptions. It includes analyzing the probability of an earthquake at specific magnitudes and depicting the resulting loss impact to PLAN insured properties. Building construction type and geographic location all have a significant impact on the analysis.

The analysis also included an evaluation of secondary loss assumptions for Fire Following Earthquake, Earthquake Sprinkler Leakage (EQSL) and Loss Amplification. Loss Amplification is generally defined as a means to determine “post loss inflation” of building materials/labor. Loss Amplification is a real phenomenon that has been experienced post catastrophic events and is largely attributable to supply and demand fluctuations similar to what occurred after the Loma Prieta EQ, Northridge EQ and Oakland Hill’s Fire.

The analysis took into consideration ABAG PLAN’s 1,585 scheduled property locations. Total insured value (TIV) for these locations is \$2,439,747,393. Building values account for 79% of the TIV while Contents account for 19.5% of the TIV. Business Interruption values amounted to 1.2% of the TIV. The analysis also uses a deductible structure of 5% per unit with a \$250K minimum.

## **ABAG PLAN PML Study – Catastrophic Risk Summary (con't)**

PLAN will utilize the loss estimates to identify areas of exposure concentration, identify locations that contribute the most to our projected loss estimates and gain a better overall understanding of our loss potential when an Earthquake occurs.

The report indicates that there is a 0.4% annual chance of one earthquake event causing \$170.5 million or more in damage net of deductible structure. This finding was based on a return period of 250 years. The pure premium indication for the above scenario is approximately \$3,269,478. **Please note:** A table with variable probabilities and return periods with corresponding impact to loss is contained on page 4 of the accompanying report.

The report also provides valuable information on specific insured locations that have high exposure to EQ loss. When analyzing exposure by location, the findings indicate heavy exposure in the cities of Pacifica, Milpitas, Gilroy, SSF and Foster City. A listing of the top 25 locations (by exposure) is contained on page 6 of the report. This data will be extremely helpful in isolating high exposure properties/locations and assisting in the evaluation of each members need for EQ insurance on a pooled or standalone basis.

Exposure by County has also been analyzed as our members are spread through various Bay Area counties. San Mateo County currently accounts for the largest percentage of our EQ exposure at 46% of TIV (723 locations). Santa Clara County represents 34% of our EQ exposure (436 locations). These two counties are followed by Solano (9.7% TIV / 211 locations) and Alameda (7.4% TIV / 130 locations), respectively.

### **Summary**

The Risk Management Committee will review the accompanying reports and discuss all risk implications. A significant number of PLAN Members are currently relying solely on State/Federal funding to address property loss post catastrophic Earthquake scenario. The report indicates that premiums/deductibles for full risk transfer (insurance) may be cost prohibitive and may not be feasible in light of the current fiscal landscape.

The RMC will continue to assess PLAN EQ risk and continue to evaluate available risk transfer/risk sharing options. Alliant will work with PLAN Risk Management to assess EQ markets on a pooled or standalone basis. Risk Management will also work with Alliant to explore optional finite risk solutions.

**AmWINS**  
Group, Inc.

THERE'S A BETTER WAY.

**ABAG**

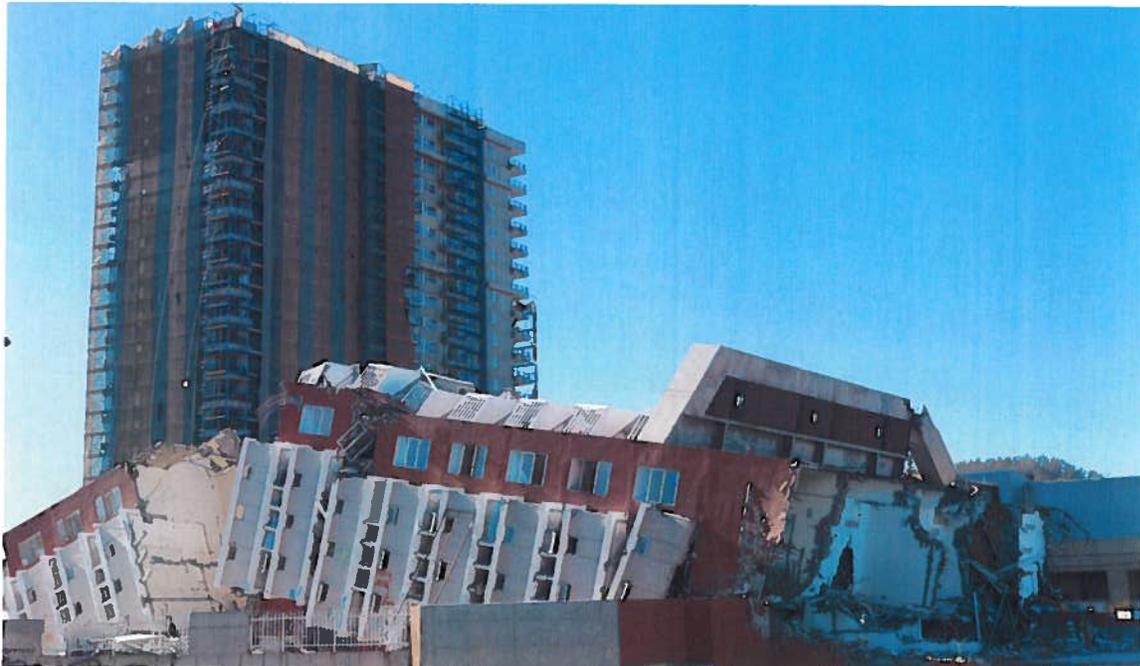
**CATASTROPHE RISK SUMMARY**

**August 27, 2013**

**Analysis Performed by:  
AmWINS Group, Inc.  
4725 Piedmont Row Drive, Suite 600  
Charlotte, NC 28210**



## **CALIFORNIA EARTHQUAKE ANALYSIS**



Images Provided by U.S. Geological Survey

THERE'S A BETTER WAY.

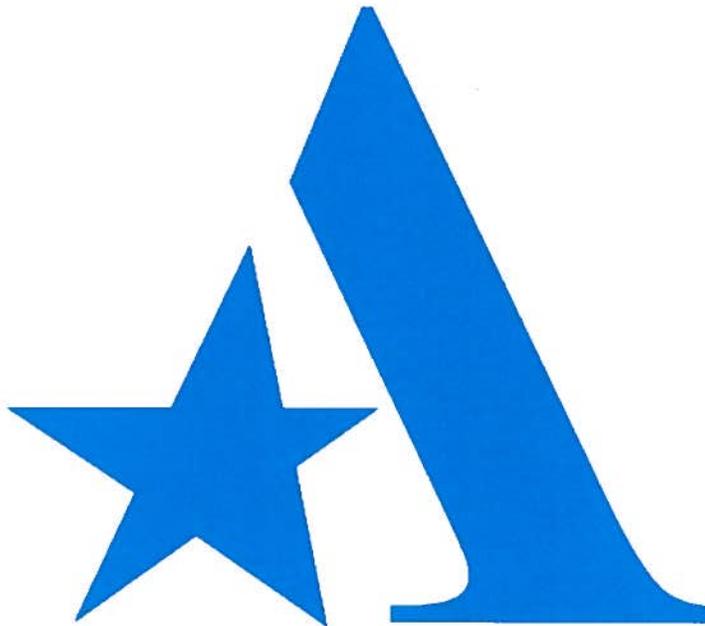


---

**Table of Contents**

---

<b>Executive Summary</b>	<b>3</b>
<b>Detailed Loss Analysis</b>	<b>4 - 5</b>
<b>Average Annual Loss (AAL) by Location</b>	<b>6</b>
<b>Top 10 Loss Causing Events</b>	<b>7</b>
<b>Discussion of RMS Methodology for Modeling PMLs and AALs</b>	<b>8</b>
<b>Earthquake Intensity Definitions (Richter Scale)</b>	<b>9</b>
<b>Catastrophe Modeling Terms</b>	<b>10</b>
<b>Limitations</b>	<b>11</b>
<b>Exposure Analysis</b>	<b>12</b>



## Executive Summary

---

AmWINS Group, Inc. performed a California earthquake analysis to calculate the potential loss for ABAG based on Risk Management Solutions (RMS) RiskLink Version 13.0 software. The analysis was performed to include the primary peril of Earthquake Shaking and the secondary perils of Fire Following, Earthquake Sprinkler Leakage (EQSL), and Loss Amplification using the RMS Stochastic Event Rate Set. The data for this analysis was provided by ABAG and represents the most recent exposure for this account. AmWINS Group, Inc. reviewed and formatted the data for use in the RMS model based on the original data received.

### Exposure Summary

The ABAG account has 1,585 locations with a total insured value (TIV) of \$2,439,747,393. Building Values account for 79.3% of the TIV while Contents accounts for 19.5% of the TIV and Business Interruption accounts for 1.2% of the TIV.

For further exposure details see the Exposure Analysis section of the report which starts on page 12.

### Analysis Summary

The analysis was performed with a deductible structure of 5% per unit with a \$250K minimum and with no limits.

### Loss Summary

Based on RMS RiskLink Version 13.0 there is a 0.4% annual chance of one earthquake event causing \$170,530,440 or more in loss net of the deductible structure and within the coverage layers being analyzed. This corresponds to a 250 year return period.

The Average Annual Loss (AAL), which corresponds to a pure premium number, for the ABAG account based on RMS RiskLink version 13.0 is \$3,269,478 net of the deductible structure and within the coverage layers being analyzed. This means that on a long-term average annual basis, the ABAG account is expected to sustain \$3,269,478 in earthquake losses to the insurance carrier.

**\*\*Note:** loss amounts stated above are for the peril of Earthquake Shaking including Fire Following, Earthquake Sprinkler Leakage (EQSL), and Loss Amplification using the RMS Stochastic Event Rate Set

For further loss details see the Detailed Loss Analysis section of the report on pages 4 - 5.

For a breakdown of the locations that contribute the most to the AAL see the AAL by Location section of the report on page 6.

The Loss Estimates produced will help the ABAG account to:

- Identify areas of exposure concentration
- Identify locations that contribute the most to modeled loss estimates
- Understand earthquake loss potential

**ABAG**

**CATASTROPHE RISK SUMMARY**

**August 27, 2013**

**Analysis Performed by:**  
**AmWINS Group, Inc.**  
**4725 Piedmont Row Drive, Suite 600**  
**Charlotte, NC 28210**

**Detailed Loss Analysis**

**Exceedance Probability Analysis for California Earthquake**

The tables below illustrate the probability of losses exceeding various amounts due to one event in a given year as described by the Occurrence Exceedance Probability (OEP) curve. Losses are shown as Ground Up (no deductible or layering contemplated), Deductible (loss to deductible layer), and Net of Deductible and Layering (takes deductible into account and isolates layer being analyzed). The Average Annual Loss (AAL) is also shown along with the variability of this amount (Standard Deviation) which is representative of the uncertainty in the magnitude of losses from an occurring event.

For a discussion of RMS methodology for modeling PMLs and AALs see page 8.

**California Earthquake Key Return Period Losses - Shake Only**

Critical Probability	Return Period (years)	Ground Up Loss	Deductible Loss	Loss Net of Deductible and Layering
0.010%	10,000	623,673,009	85,058,277	544,838,096
0.020%	5,000	553,727,175	81,651,472	477,279,369
0.100%	1,000	356,367,824	68,968,447	287,586,201
0.200%	500	253,868,560	63,443,020	194,858,388
0.400%	250	158,783,819	42,077,316	115,219,814
1.000%	100	82,311,417	31,416,833	53,209,912
2.000%	50	47,627,201	22,234,847	26,307,981
4.000%	25	22,627,289	13,297,961	8,888,184
10.000%	10	3,965,814	3,332,224	0
20.000%	5	206,878	206,915	0
<b>Average Annual Loss</b>		3,977,381	1,720,877	2,256,504
<b>Standard Deviation</b>		23,637,701	6,558,173	18,254,976

**California Earthquake Key Return Period Losses - Shake and Fire Following**

Critical Probability	Return Period (years)	Ground Up Loss	Deductible Loss	Loss Net of Deductible and Layering
0.010%	10,000	629,501,847	83,009,470	552,450,905
0.020%	5,000	559,364,294	79,721,202	485,436,149
0.100%	1,000	361,337,833	67,100,590	294,153,425
0.200%	500	257,768,812	61,892,881	200,225,284
0.400%	250	160,434,484	41,367,075	117,342,343
1.000%	100	82,817,096	31,028,643	54,199,435
2.000%	50	47,856,759	21,963,195	26,740,095
4.000%	25	22,694,421	13,335,006	9,062,944
10.000%	10	3,968,229	3,336,374	0
20.000%	5	206,856	206,729	0
<b>Average Annual Loss</b>		4,005,113	1,705,876	2,299,237
<b>Standard Deviation</b>		23,891,724	6,461,141	18,600,938

\*\*Note: loss amounts stated above use the RMS Stochastic Event Rate Set



**Detailed Loss Analysis**

**Exceedance Probability Analysis for California Earthquake**

The tables below illustrate the probability of losses exceeding various amounts due to one event in a given year as described by the Occurrence Exceedance Probability (OEP) curve. Losses are shown as Ground Up (no deductible or layering contemplated), Deductible (loss to deductible layer), and Net of Deductible and Layering (takes deductible into account and isolates layer being analyzed). The Average Annual Loss (AAL) is also shown along with the variability of this amount (Standard Deviation) which is representative of the uncertainty in the magnitude of losses from an occurring event.

For a discussion of RMS methodology for modeling PMLs and AALs see page 8.

**California Earthquake Key Return Period Losses - Shake including Loss Amplification**

Critical Probability	Return Period (years)	Ground Up Loss	Deductible Loss	Loss Net of Deductible and Layering
0.010%	10,000	857,626,809	84,854,023	778,795,500
0.020%	5,000	756,367,249	81,524,019	679,713,160
0.100%	1,000	475,609,291	69,151,659	406,921,395
0.200%	500	332,160,642	63,785,152	271,949,501
0.400%	250	202,391,078	44,301,228	156,899,840
1.000%	100	101,088,033	34,027,759	69,579,880
2.000%	50	55,997,546	23,787,536	32,911,493
4.000%	25	24,983,603	13,873,082	10,517,659
10.000%	10	4,016,026	3,383,729	0
20.000%	5	207,638	207,815	0
<b>Average Annual Loss</b>		4,791,212	1,798,151	2,993,061
<b>Standard Deviation</b>		30,894,918	6,828,958	25,473,835

**California Earthquake Key Return Period Losses - Shake, Fire Following, EQSL including Loss Amplification**

Critical Probability	Return Period (years)	Ground Up Loss	Deductible Loss	Loss Net of Deductible and Layering
0.010%	10,000	904,529,046	83,767,026	826,403,727
0.020%	5,000	799,691,143	80,710,466	724,114,367
0.100%	1,000	508,401,471	69,180,278	439,495,577
0.200%	500	357,251,481	64,593,637	295,958,933
0.400%	250	217,077,747	45,220,281	170,530,440
1.000%	100	108,409,295	34,953,038	75,936,856
2.000%	50	60,084,898	24,454,855	36,279,914
4.000%	25	26,696,781	14,256,870	11,818,943
10.000%	10	4,194,260	3,497,987	0
20.000%	5	210,553	210,650	0
<b>Average Annual Loss</b>		5,116,279	1,846,799	3,269,478
<b>Standard Deviation</b>		32,952,144	6,968,664	27,428,586

\*\*Note: loss amounts stated above use the RMS Stochastic Event Rate Set



**ABAG**

**CATASTROPHE RISK SUMMARY**

**August 27, 2013**

**Analysis Performed by:**  
**AmWINS Group, Inc.**  
**4725 Piedmont Row Drive, Suite 600**  
**Charlotte, NC 28210**

**Average Annual Loss (AAL) by Location**

**AAL Analysis for California Earthquake**

Locations are listed below based on AAL contribution in descending order. A maximum of 25 locations are shown.

**Using Loss Net of Deductible and Layering as the financial perspective**

Location Number	Location Name	City	State	TIV	TIV %	AAL	AAL %
1139	WATER RECYCLING PLANT	PACIFICA	CA	118,056,514	4.84%	82,905	2.54%
901	POLICE/COMMUNITY SERVICE	MILPITAS	CA	20,681,830	0.85%	55,252	1.69%
749	GILROY LIBRARY	GILROY	CA	34,419,538	1.41%	42,383	1.30%
1474	PUMP STATION (WEST WEAT)	SOUTH SAN FRANCISCO	CA	29,367,960	1.20%	36,636	1.12%
1429	MUNICIPAL SERVICES BLDG.	SOUTH SAN FRANCISCO	CA	22,593,182	0.93%	35,725	1.09%
955	CITY HALL	MILPITAS	CA	23,595,639	0.97%	33,589	1.03%
646	LIBRARY/COMM. CTR.	FOSTER CITY	CA	10,287,234	0.42%	31,622	0.97%
588	REC. & SENIOR CTR.	FOSTER CITY	CA	9,080,407	0.37%	30,898	0.95%
921	MILPITAS EAST PARKING GARAGE	MILPITAS	CA	9,243,338	0.38%	30,140	0.92%
966	MILPITAS PUBLIC LIBRARY	MILPITAS	CA	28,521,196	1.17%	27,769	0.85%
1431	CONFERENCE CENTER	SOUTH SAN FRANCISCO	CA	12,757,384	0.52%	27,446	0.84%
730	GILROY GARDENS	GILROY	CA	23,768,629	0.97%	26,392	0.81%
1088	GEORGE M. SILLIMAN ACTIV CENTER	NEWARK	CA	25,976,777	1.06%	25,837	0.79%
580	CITY HALL/FIRE STATION	FOSTER CITY	CA	17,853,892	0.73%	24,860	0.76%
1107	SEWAGE TRT PLNT	PACIFICA	CA	16,952,039	0.69%	24,285	0.74%
209	FIFTH STREET PIER	BENICIA	CA	5,442,397	0.22%	21,949	0.67%
1269	LIBRARY	SARATOGA	CA	13,968,346	0.57%	19,294	0.59%
1531	LIBRARY	TIBURON	CA	5,001,412	0.20%	19,135	0.59%
1145	MUNICIPAL PIER	PACIFICA	CA	15,727,572	0.64%	18,012	0.55%
463	SHANNON PARK - COMMUNITY CENTER	DUBLIN	CA	8,909,827	0.37%	17,565	0.54%
811	LIBRARY	LOS GATOS	CA	13,681,250	0.56%	17,494	0.54%
315	AERATION BASINS	BURLINGAME	CA	7,783,455	0.32%	17,271	0.53%
262	LIBRARY	BURLINGAME	CA	35,941,038	1.47%	17,212	0.53%
86	CIVIC CENTER/CITY HALL/COMMUNITY CENTER	BENICIA	CA	13,287,449	0.54%	16,757	0.51%
429	POLICE STATION	COLMA	CA	6,129,117	0.25%	16,408	0.50%
<b>TOTAL</b>				<b>529,027,422</b>	<b>21.68%</b>	<b>716,838</b>	<b>21.93%</b>

\*\*Note: loss amounts stated above are for the peril of Earthquake Shaking including Fire Following, Earthquake Sprinkler Leakage (EQSL), and Loss Amplification using the RMS Stochastic Event Rate Set



**Top 10 Loss Causing Events**

**Top Events Analysis for California Earthquake**

Events are listed below based on loss amount in descending order. The top 10 events are shown.

Using Loss Net of Deductible and Layering as the financial perspective

Event ID	Event Description	Richter Magnitude	Rate	Return Period (yrs)	Loss Amount	Exposed Value	Mean Damage Ratio
2006272	Crustal Fault A-Type, California, Northern California, Multi-segment Cascade	8.2	0.0029275%	34,159	653,461,227	1,953,993,913	33.4%
2006273	Crustal Fault A-Type, California, Northern California, Multi-segment Cascade	8.1	0.0085894%	11,642	632,313,433	1,914,739,551	33.0%
2006246	Crustal Fault A-Type, California, Northern California, Multi-segment Cascade	8.1	0.0000132%	7,549,164	632,261,059	1,914,591,288	33.0%
2006228	Crustal Fault A-Type, California, Northern California, Multi-segment Cascade	8.1	0.0001541%	648,795	585,765,238	1,816,156,971	32.3%
2006274	Crustal Fault A-Type, California, Northern California, Multi-segment Cascade	7.9	0.0363712%	2,749	573,256,143	1,816,664,408	31.6%
2006247	Crustal Fault A-Type, California, Northern California, Multi-segment Cascade	7.9	0.0003454%	289,542	573,255,586	1,816,666,532	31.6%
2006229	Crustal Fault A-Type, California, Northern California, Multi-segment Cascade	8.0	0.0003734%	267,775	551,580,270	1,739,009,045	31.7%
2006230	Crustal Fault A-Type, California, Northern California, Multi-segment Cascade	7.9	0.0004945%	202,232	529,257,233	1,707,246,815	31.0%
2006203	Crustal Fault A-Type, California, Northern California, Multi-segment Cascade	7.9	0.0000019%	51,532,048	529,255,436	1,706,910,314	31.0%
2006249	Crustal Fault A-Type, California, Northern California, Multi-segment Cascade	7.7	0.0000452%	2,212,250	502,119,750	1,723,921,548	29.1%

\*\*Note: loss amounts stated above are for the peril of Earthquake Shaking including Fire Following, Earthquake Sprinkler Leakage (EQSL), and Loss Amplification using the RMS Stochastic Event Rate Set



---

## Discussion of RMS Methodology for Modeling PMLs and AALs

---

RMS determines catastrophic losses using complex software that simulates catastrophic events and determines losses from those events based on building characteristics. The process begins by entering building information into RMS (construction type, year built, occupancy, etc.) and the better information you have, the better (more accurate) the results will be. For missing characteristics, RMS uses default values based on attributes of the industry exposure.

Once information is loaded, RMS will run a series of catastrophic events (both historical and simulated) against those buildings. Each event run has a probability associated with it so as to tell how "likely" that type of event is to occur in a given year. Losses are determined on a per building, per event basis based on how the attributes of each event (wind speed, quake magnitude, etc.) would affect that type of building (based on the building characteristics entered). Engineering information has been gathered based on actual claim data and inspections to see how different types of buildings (age, construction, etc.) will react to either wind, storm surge, or an earthquake.

Losses from each building-event combination are used to come up with a distribution of losses based on probability of occurrence. Statistical methods determine this distribution which is called the EP (Exceedance Probability) Curve and it is used to derive Probable Maximum Loss (PML) numbers. This curve shows probability of exceedance on the y-axis and amount of loss on the x-axis so points on the curve are defined as the loss amount (from x-axis) that will be exceeded a certain percentage of the time (from y-axis) in a given year. Certain points from this curve are focused on, like a 1% probability of exceedance in a given year (the 1-in-100 year event, or 100-year PML) which means that losses will be greater than or equal to that loss amount 1% of the time in a given year. Different points can be chosen, but it must be understood that no one event in RMS is what you would call the 1-in-100 year (or 1-in-X year) event. All events are combined to generate a curve that tells what losses would be from a 1-in-100 year (or 1-in-X year) event.

Average Annual Loss (AAL) is also generated and this tells the amount of loss to be expected on an annual basis. This acts as a pure premium number even though catastrophes are not something that occur "on average" in insurance. AALs are calculated on a per building basis as the losses from each event are multiplied by the probability of such event occurring in a given year. These are then added up across all events. Once these are calculated for each building, all building AALs are added up to get the overall account AAL. No curve generation is done here so these numbers don't depend on the statistical methods employed in the generation of the EP Curve.

In short, RMS uses simulated and historical catastrophic events (hurricanes, earthquakes, etc.) to determine the exposure and vulnerability of a book of business to catastrophic losses. Engineering and claims data are used to determine vulnerability of buildings, and seismology and meteorology are used to determine the probability of earthquakes, hurricanes, or other events along with quake magnitudes, storm size, and event location. Simulated losses for buildings are generated and combined to give the overall loss picture for the account.

**Earthquake Intensity Definitions (Richter Scale)**

<b>RICHTER MAGNITUDE</b>	<b>DESCRIPTION</b>	<b>EARTHQUAKE EFFECTS</b>	<b>FREQUENCY OF OCCURRENCE</b>
Less than 2.0	Micro	Micro earthquakes, not felt.	Continual (not recorded)
2.0-2.9	Minor	Generally not felt, but recorded.	1,300,000 per year (est.)
3.0-3.9	Minor	Often felt, but rarely cause damage.	130,000 per year (est.)
4.0-4.9	Light	Noticeable shaking of indoor items, rattling noises. Significant damage unlikely.	13,000 per year (est.)
5.0-5.9	Moderate	Can cause major damage to poorly constructed buildings over small regions. At most slight damage to well-designed buildings.	1,319 per year
6.0-6.9	Strong	Can be destructive in areas up to about 160 kilometers (100 miles) across in populated areas.	134 per year
7.0-7.9	Major	Can cause serious damage over larger areas.	13 per year
8.0-8.9	Great	Can cause serious damage in areas several hundred miles across.	1 per year
9.0-9.9	Great	Devastating in areas several thousand miles across	1 per 10 years (est.)
10.0+	Epic	Never recorded; widespread devastation across extremely large areas	Extremely Rare (unknown)

\*\*Note: Based on U.S. Geological Survey documents



**Catastrophe Modeling Terms**

<b>TERM:</b>	<b>DEFINITION:</b>
Aggregate Exceedance Probability (AEP)	The probability that the total cost of one or more occurrences will combine in a year to exceed a certain threshold.
Average Annual Loss (AAL)	The expected annual loss on a long-term basis. Mathematically, it is the expected value of the aggregate loss distribution.
Coefficient Variation (CV)	The spread of loss around the mean, reflecting the secondary uncertainty in the size of loss.
Loss Amplification	"Post loss inflation" of building materials/labor, typically applied only to building damage, and not to contents or business interruption components.
Exceedance Probability (EP)	The probability of exceeding specified loss thresholds. In risk analysis, this probability relationship is commonly represented as a curve which defines the probability of various levels.
Exposure Value	The total reported values at risk, potentially subject to a peril or event against which it is insured.
Geocoding	The process of associating an address with an estimate of latitude and longitude coordinates.
Gross Loss	The insurer's loss after deductibles, attachment point(s), and limits are applied, but before reinsurance.
Ground Up Loss	The total amount of loss sustained before deductibles, underlying coverages and reinsurance are applied.
Mean Damage Ratio	The ratio of the expected loss to the replacement value of exposed properties.
Occurrence Exceedance Probability (OEP)	The probability that a single occurrence will exceed a certain threshold.
Return Period	The expected length of time between recurrences of two events with similar characteristics. The return period can also refer to specific level of loss.
Secondary Peril (Subperil)	Hazards that are an additional source of loss to the primary peril. Examples include "storm surge" as a result of a hurricane, or "fire" as a direct result of an earthquake.

---

## Limitations

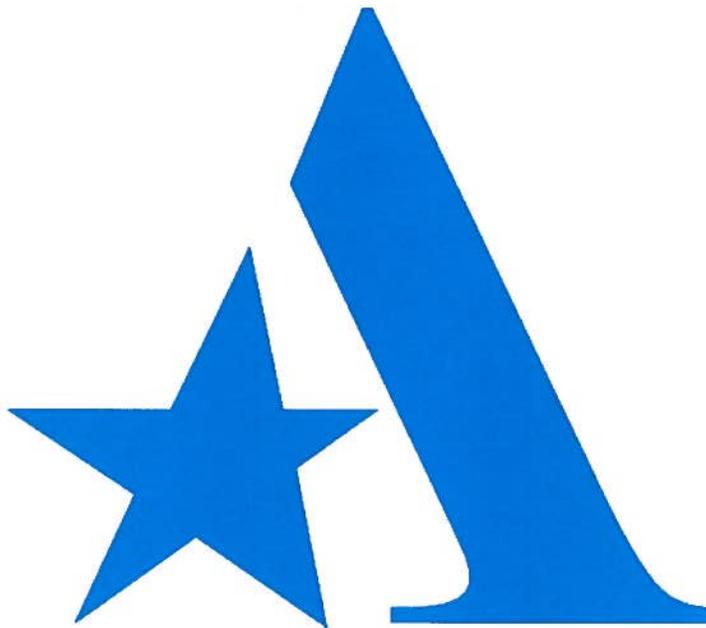
---

AmWINS Group, Inc recommends that the results in this report are not relied upon in isolation when making decisions that may affect the solvency of the company. AmWINS Group, Inc. makes no warranty about the accuracy of the modeled results and has made no attempt to independently verify them. Results of this analysis are for the sole use of AmWINS Group, Inc and its clients and should not be presented to insurance carriers.

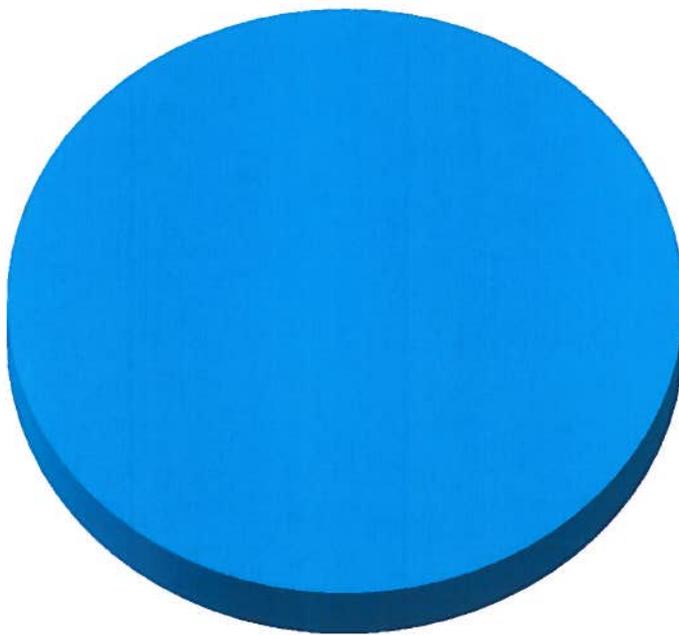
This report, and the analyses, models and predictions contained herein ('Information'), are based on data provided by ABAG to AmWINS Group, Inc. and compiled using proprietary computer risk assessment technology of Risk Management Solutions, Inc. ('RMS'). The technology and data used in providing this Information is based on the scientific data, mathematical and empirical models, and encoded experience of scientists and specialists (including without limitation: earthquake engineers, wind engineers, structural engineers, geologists, seismologists, meteorologists, geotechnical specialists and mathematicians). As with any model of physical systems, particularly those with low frequencies of occurrence and potentially high severity outcomes, the actual losses from catastrophic events may differ from the results of simulation analyses. Furthermore, the accuracy of predictions depends largely on the accuracy and quality of the data provided to and used by AmWINS Group, Inc. The Information is provided under license to AmWINS Group, Inc. and is RMS' proprietary and confidential information and may not be shared with any third party without the prior written consent of both AmWINS Group, Inc. and RMS. Furthermore, this Information may only be used for the specific business purpose specified by AmWINS Group, Inc. and for no other purpose, and may not be used under any circumstances in the development or calibration of any product or service offering that competes with RMS.

The recipient of this Information is further advised that RMS is not engaged in the insurance, reinsurance, or related industries, and that the Information provided is not intended to constitute professional advice. RMS SPECIFICALLY DISCLAIMS ANY AND ALL RESPONSIBILITIES, OBLIGATIONS AND LIABILITY WITH RESPECT TO ANY DECISIONS OR ADVICE MADE OR GIVEN AS A RESULT OF THE INFORMATION OR USE THEREOF, INCLUDING ALL WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL RMS (OR ITS PARENT, SUBSIDIARY, OR OTHER AFFILIATED COMPANIES) BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES WITH RESPECT TO ANY DECISIONS OR ADVICE MADE OR GIVEN AS A RESULT OF THE CONTENTS OF THIS INFORMATION OR USE THEREOF."

# Exposure Analysis



## Exposure by Occupancy

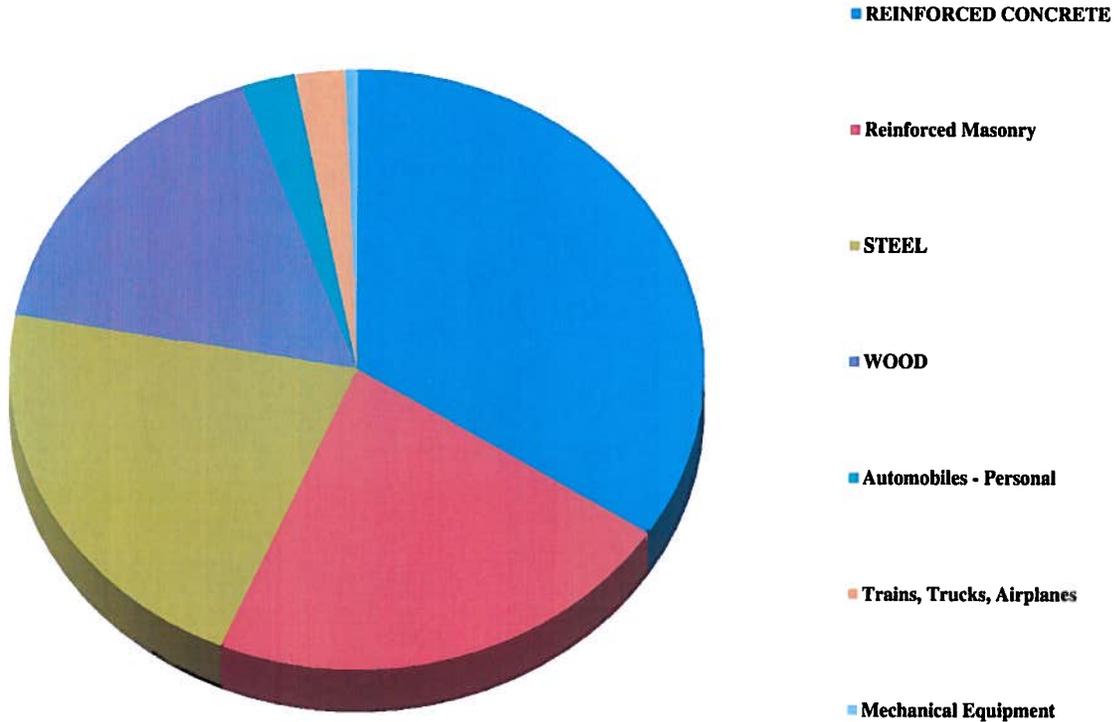


■ General Services

\*\*Note: Chart shows exposure based on TIV

Occupancy	TIV	Percentage	Locations
General Services	2,439,747,393	100.0%	1,585
<b>Grand Total</b>	<b>2,439,747,393</b>	<b>100.0%</b>	<b>1,585</b>

## Exposure by Construction



\*\*Note: Chart shows exposure based on TIV

Construction	TIV	Percentage	Locations
REINFORCED CONCRETE	832,630,988	34.1%	386
Reinforced Masonry	542,195,920	22.2%	550
STEEL	524,679,286	21.5%	202
WOOD	406,886,856	16.7%	355
Automobiles - Personal	61,250,247	2.5%	30
Trains, Trucks, Airplanes	56,715,401	2.3%	20
Mechanical Equipment	15,388,695	0.6%	42
<b>Grand Total</b>	<b>2,439,747,393</b>	<b>100.0%</b>	<b>1,585</b>

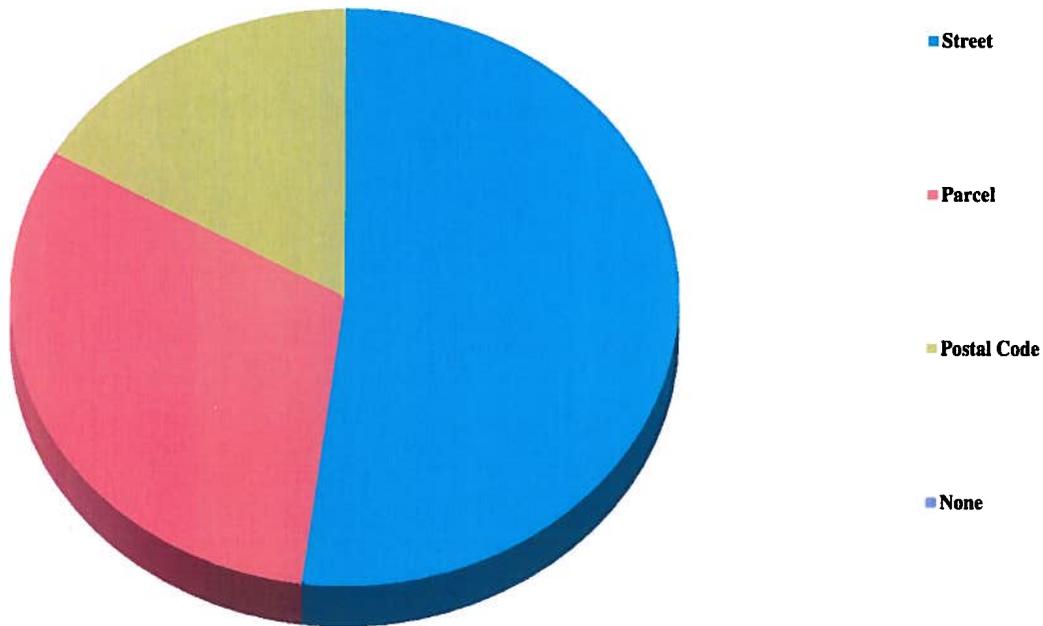
**ABAG**

**CATASTROPHE RISK SUMMARY**

**August 27, 2013**

**Analysis Performed by:**  
**AmWINS Group, Inc.**  
**4725 Piedmont Row Drive, Suite 600**  
**Charlotte, NC 28210**

**Exposure by Geocoding**



\*\*Note: Chart shows exposure based on TIV

Geocoding	TIV	Percentage	Locations
Street	1,268,223,207	52.0%	755
Parcel	763,239,155	31.3%	378
Postal Code	407,983,418	16.7%	450
None	301,613	0.0%	2
<b>Grand Total</b>	<b>2,439,747,393</b>	<b>100.0%</b>	<b>1,585</b>



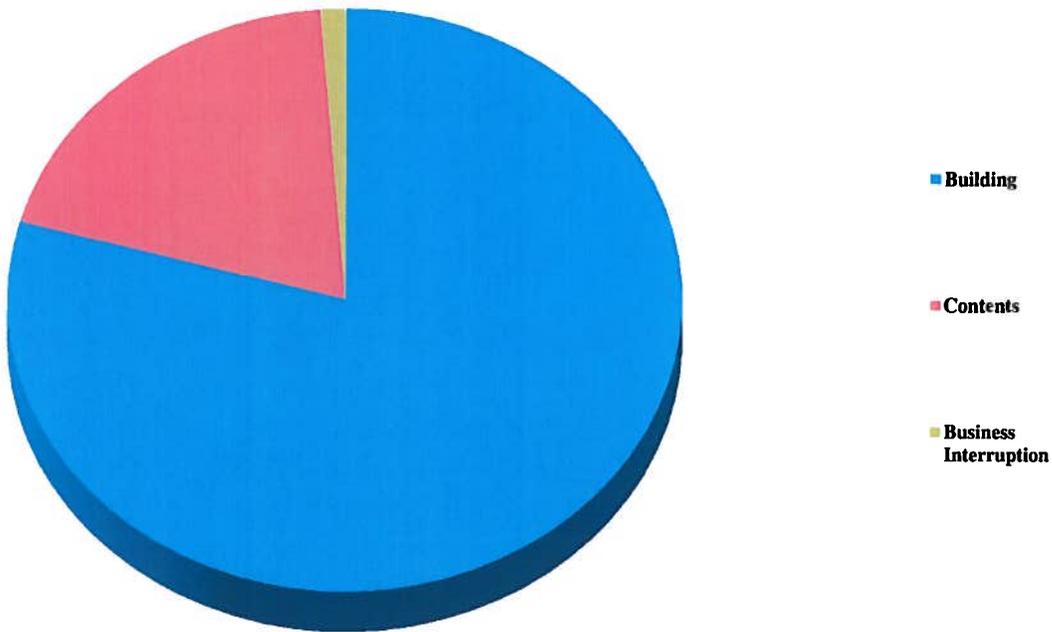
**ABAG**

**CATASTROPHE RISK SUMMARY**

**August 27, 2013**

**Analysis Performed by:**  
**AmWINS Group, Inc.**  
**4725 Piedmont Row Drive, Suite 600**  
**Charlotte, NC 28210**

### Exposure by Coverage



**\*\*Note:** Chart shows exposure based on TIV

Coverage	TIV	Percentage
Building	1,934,814,120	79.3%
Contents	474,851,814	19.5%
Business Interruption	30,081,459	1.2%
<b>Grand Total</b>	<b>2,439,747,393</b>	<b>100.0%</b>



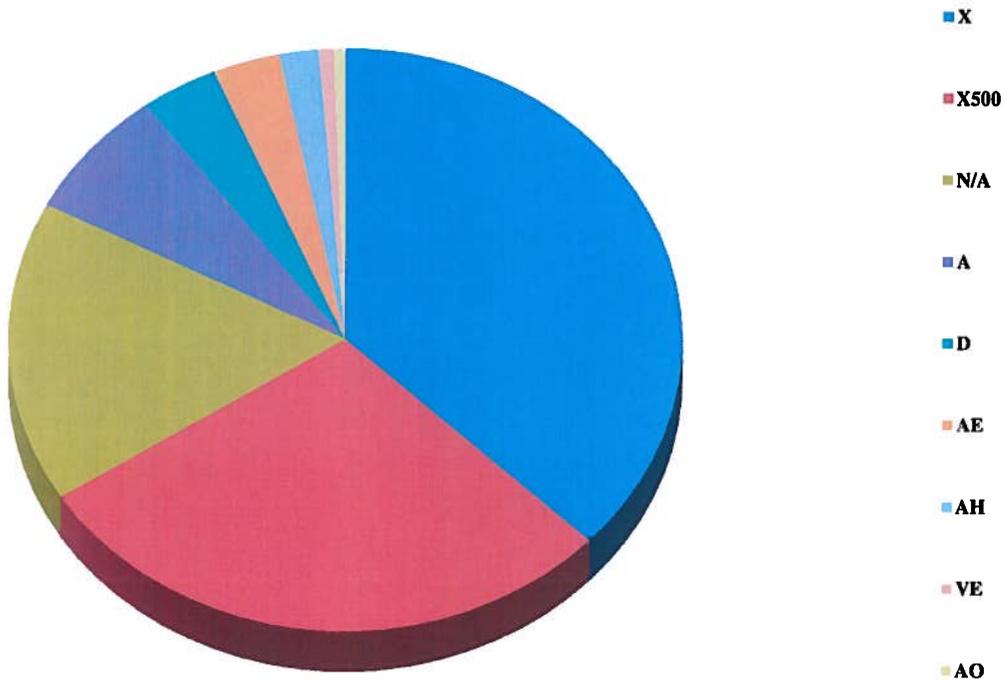
**ABAG**

**CATASTROPHE RISK SUMMARY**

**August 27, 2013**

**Analysis Performed by:**  
**AmWINS Group, Inc.**  
4725 Piedmont Row Drive, Suite 600  
Charlotte, NC 28210

**Exposure by Flood Zone**



\*\*Note: Chart shows exposure based on TIV

Flood Zone	TIV	Percentage	Locations
X	904,497,935	37.1%	554
X500	703,664,961	28.8%	310
N/A	408,285,031	16.7%	452
A	176,300,450	7.2%	103
D	90,131,976	3.7%	71
AE	78,736,720	3.2%	61
AH	46,222,283	1.9%	22
VE	17,956,044	0.7%	4
AO	13,951,993	0.6%	8
<b>Grand Total</b>	<b>2,439,747,393</b>	<b>100.0%</b>	<b>1,585</b>



## Exposure by State



**\*\*Note:** Darker reds indicate higher concentration of exposure (TIV)

State	TIV	Percentage	Locations
CA	2,439,747,393	100.0%	1,585
<b>Grand Total</b>	<b>2,439,747,393</b>	<b>100.0%</b>	<b>1,585</b>

## Exposure by County



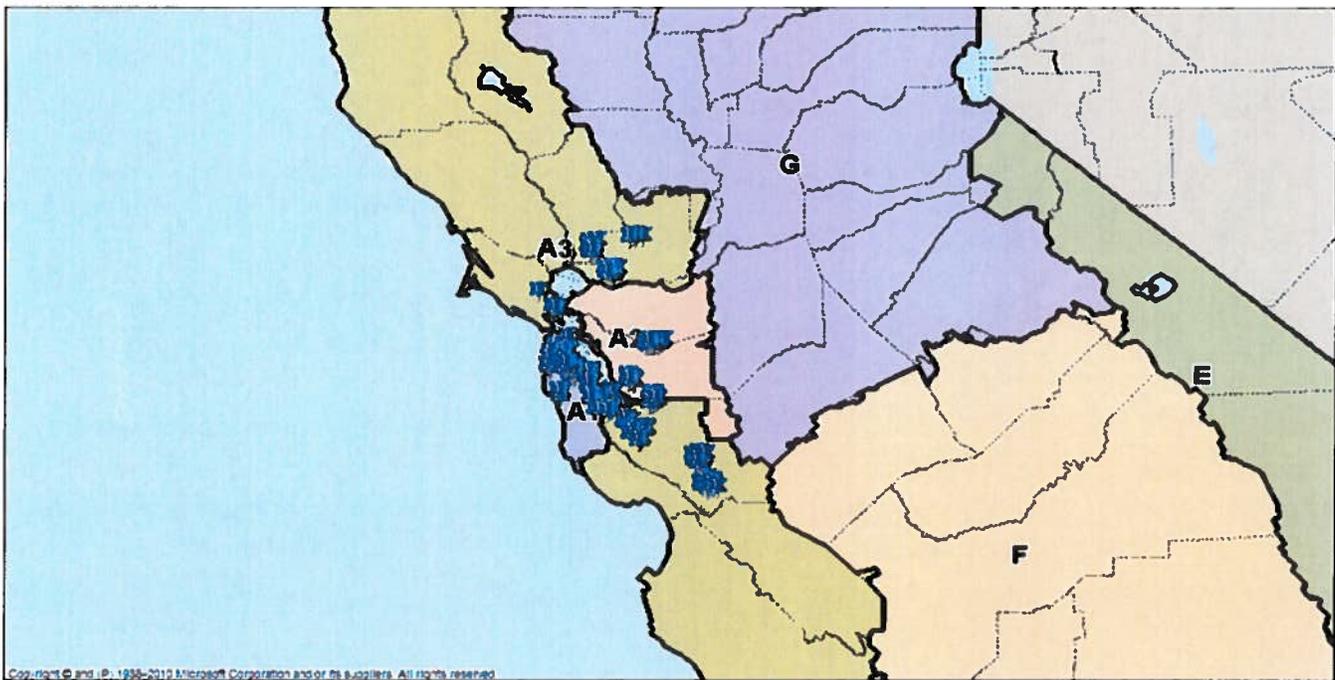
\*\*Note: Map is focused on states/region with highest concentration of exposure (TIV)

\*\*Note: Darker reds indicate higher concentration of exposure (TIV)

County	TIV	Percentage	Locations
SAN MATEO COUNTY	1,128,416,090	46.3%	723
SANTA CLARA COUNTY	823,371,654	33.7%	436
SOLANO COUNTY	236,590,631	9.7%	211
ALAMEDA COUNTY	180,570,105	7.4%	130
NAPA COUNTY	50,614,868	2.1%	55
MARIN COUNTY	19,725,763	0.8%	27
0	301,613	0.0%	2
SAN FRANCISCO COUNTY	156,669	0.0%	1
<b>Grand Total</b>	<b>2,439,747,393</b>	<b>100.0%</b>	<b>1,585</b>

## Exposure by CRESTA Zone

### ABAG Locations in Blue



\*\*Note: CRESTA Zones only apply to California locations

CRESTA Zone	TIV	Percentage	Locations
A3	1,130,302,916	46.3%	729
A1	1,128,572,759	46.3%	724
A2	180,570,105	7.4%	130
None	301,613	0.0%	2
<b>Grand Total</b>	<b>2,439,747,393</b>	<b>100.0%</b>	<b>1,585</b>

## Earthquake Hazard

### ABAG Locations in Blue



**\*\*Note:** Colored areas of map show earthquake loss hazard as derived from actual RMS version 11.0 results. Dark colors exhibit higher loss potential than light colors when exposures with consistent values and characteristics are modeled.

# AGENDA ITEM

## #8B

Insurance Program



Date: October 16, 2013  
To: Risk Management Committee  
From: Jim Hill, PLAN Risk Management Officer  
Subject: ABAG PLAN SIR Buydown Options – Renewal Indications

**Action Required**

This report is for informational purposes only. No action required. Report is being provided to assist in the evaluation of the cost of risk transfer (excess insurance) within ABAG PLAN Program retained limit (\$5 million). RMC will continue to evaluate the impact of retained layer risk transfer options in an effort to minimize and stabilize cost within the program retained layer. Report results will also be provided to the Executive Committee and Board of Directors.

**Summary**

PLAN staff requested an analysis of excess premium costs for various layers within ABAG PLAN's retained layer (\$5 million). The task was undertaken by our broker Alliant. Alliant explored various options, including:

- \$3 million xs \$2 million limits (with aggregate stop loss protection)
- \$2 million xs \$3 million limits (with aggregate stop loss protection)
- \$1 million xs \$4 million limits (with aggregate stop loss protection)

The coverage would be "following form" reinsurance of ABAG PLAN MOC. A variety of carriers were approached with several quotes pending.

Preliminary Cost (premium) indications were as follows:

**Option 1.** \$3M xs \$2M @ \$1.5 million premium. \$1.76 million premium for inclusion of aggregate stop loss (ASL) at \$19.5M. \$1.85 million premium for ASL at \$17.5M.

**Option 2.** \$2M xs \$3M @ \$747K premium. \$785K premium for inclusion of ASL @ \$22M.

**Option 3.** \$1M xs \$4M @ \$316K premium. \$356K premium for inclusion of ASL @ \$23.5M.

The initial quotes were deemed "out of line" when compared with PLAN Actuarial expected loss funding levels. The pricing implications are notable, particularly ASL pricing. Adverse pricing is being driven by current adverse loss experience within PLAN retained layer. Staff will revisit excess premium options at PLAN renewal. Staff will continue to explore the cost/benefit of procuring insurance versus retaining risk in the \$5M layer.

# AGENDA ITEM

## #8C

Insurance Program



Date: October 16, 2013  
To: Risk Management Committee  
From: Jim Hill, PLAN Risk Management Officer  
Subject: ABAG PLAN Actuarial Review of Member Retained Limits – Draft Report

### **Action Required**

This report is for informational purposes only. No action is required at this time. This report is being provided to the Committee in response to questions related to the impact of member deductibles on PLAN results and the appropriateness of member deductibles based on Actuarial review and analysis of loss patterns. RM Committee may recommend further action for the Executive Committee, Actuary Committee and Board with respect to policy development on this subject.

### **Overview**

PLAN Actuary (Bickmore Risk Services) has completed a supplemental review of ABAG PLAN's self-insured liability program. The supplemental review consisted of a study of the appropriateness (from an Actuarial perspective) of each member's Deductible/SIR limit.

The study approached the adequacy of each member's retained limit from two standpoints.

1. Member "Size" – Using the member's size we assessed retained limit adequacy using "ground up" statistical measurements. The analysis utilizes a number of statistics including payroll, reported claims and capped losses. This approach provides a good benchmark for the initial establishment of member retained limits. It follows the notion that the bigger the member, the higher the SIR should be.
2. "Burn Approach" – Using "pool" statistics, this approach identifies those pool members who have had more loss experience in the pool layer than others. The analysis utilizes "pooled claims" (number of claims above member retained limits) and "pooled losses" (number of loss dollars above the member retained limits). It follows the notion the more often a member's losses occur in the pool layer, the higher the SIR should be.

### **Summary**

Based on the review and analysis using the above two methodologies, the following observations were noted:

**Benicia (\$25,000)** – Study indicates that Benicia may be more suitable for a higher retention limit. This is indicated by both the size and burn approaches.

**Cupertino (\$250,000)** – Study indicates that Cupertino may be more suitable for a lower retention limit. This is indicated by both the size and burn approaches.

**Portola Valley (\$25,000) and Newark (\$100,000)** – Study indicates that both Portola Valley and Newark may be more suitable for a lower retained limit. This is indicated by the "burn" approach.

Please note that this study identifies certain PLAN members and may imply that there should be a change from one retained limit to another. The appropriateness of making any change to a member retained limit should be carefully evaluated. There may be other qualitative information which justifies selection of any given retained limit. Some PLAN members may desire to retain more risk voluntarily (higher tolerable risk bearing capacity) while others may have a lower retention and lower risk bearing capacity due to fiscal constraints. A material change in a member's operations may also warrant further analysis in terms of expected outcomes and impact to retain layer selection.

DRAFT



Tuesday, July 23, 2013

Mr. James Hill  
Risk Manager  
Association of Bay Area Governments  
101 Eighth Street  
Oakland, CA 94607

Re: Actuarial Review of the Self-Insured Liability Program  
- Member Retained Limits

Dear Mr. Hill:

As you requested, we have completed our supplemental review of ABAG's self-insured liability program. In this report, we present the results of our analysis of the appropriateness of member retained limits. Each member selects a retained limit of \$25,000, \$50,000, \$100,000, or \$250,000.

We approached the appropriateness of the members' current retained limit from two standpoints. First, we compared the members' "size" using "ground-up" statistical measures. This approach provides a good benchmark for initial ordering of the members' retained limits. Second, we compared the members' "burn" using "pool" statistics. This approach identifies those pool members who have had more loss experience in the pool layer than others. The results of these approaches are documented in this report.

A summary of the findings are as follows:

- Benicia (\$25,000) may be more appropriate for a higher retained limit. This is indicated by both the size and burn approaches (Exhibit 1, Page 4 and Exhibit 2, Page 7).
- Cupertino (\$250,000) may be more appropriate for a lower retained limit. This is indicated by both the size and burn approaches (Exhibit 1, Page 4 and Exhibit 2, Page 7).
- Portola Valley (\$25,000) and Newark (\$100,000) may be more appropriate for a lower retained limit. This is indicated by the burn approach (Exhibit 2, Page 7).

**DRAFT**

**The “Size” Approach**

Using the size approach a number of statistics were considered.

1. Payroll – The payroll distribution is a general indicator of exposure. Generally, the greater the exposure, the greater the number of expected claims, and the higher the likelihood of a large loss. So, the retained limit should generally increase as payrolls increase.
2. Reported Claims – Generally, the greater the number of total reported claims, the higher the likelihood of a large loss, and the larger the appropriate retained limit. We considered claims over a 10-year (stable) and 5-year (responsive) period.
3. Capped Losses – Again, generally, the greater the amount of losses (paid or incurred), the higher the likelihood of a large loss, and the larger the appropriate retained limit. We considered losses capped at \$50,000 per claim over a 10-year (stable) and 5-year (responsive) period.

Aggregate and annualized size statistics based on ground up losses are shown on Exhibit 1, Page 1 and 2. The ranking of those statistics between the members is shown on Exhibit 1, Page 3. Rankings are re-indexed least (1) to greatest (29) on Exhibit 1, Page 4 relative to the ranking implied by their current retained limit. These statistics are based on loss data valued as of December 31, 2012.

A summary of the size rankings are shown below for those members with strong indications either up or down:

<u>Member</u>	<u>Current Retained Limit</u>	<u>Indicated Rank</u>	<u>Current Rank</u>	<u>Indicated Versus Current</u>
<b>Increase Indicated</b>				
Benicia	25,000	25	9	+16
<b>Decrease Indicated</b>				
Cupertino	250,000	13	28	-15

As shown, based upon the size approach, statistics indicate an increase in retained limit for Benicia and a decrease for Cupertino.

**The “Burn” Approach**

Using the burn approach a number of statistics were considered.

1. Pool Claims – The number of claims for which the loss amount (paid or incurred) has exceeded a member’s current retained limit is a measure of pool frequency. A member with an unusually high number of losses above its retained limit, or above a multiple of its retained limit, may be appropriate for a higher retained limit.
2. Pool Losses – Loss amounts (paid or incurred) that exceed the member’s retained limit are pooled and paid by all members; therefore, it might be appropriate that a member with an unusually high amount of loss in excess of its retained limit increase its retention.

Using current member retained limit, the aggregate burn statistics based on claim counts are shown in Exhibit 2, Page 1 and the aggregate burn statistics based on losses are shown in Exhibit 2, Page 3. Those statistics expressed annually are shown in Exhibit 2, Page 2 for claim counts and Exhibit 2, Page 4 for losses. These statistics are based on loss data valued as of December 31, 2012.

One way to gauge the appropriateness of a given member’s current retained limit is to compare burn statistics to pool averages. Claim indices are calculated in Exhibit 2, Page 5 based upon claim counts on Exhibit 2, Page 2. Loss indices are calculated in Exhibit 2, Page 6 based upon losses in Exhibit 2, Page 4. In this report, the loss index is determined by assigning a “-1” to member statistics which are less than 25% of the pool average for that statistic, and “+1” to member statistics which are greater than 300% of the pool average for that statistic.

Weighted indices are derived on Exhibit 2, Page 7. The claim count index is derived based upon the indices and weights shown on Exhibit 2, Page 5. The loss index is derived based upon the indices and weights shown on Exhibit 2, Page 6. These indices are then combined into a single index by weighting together the claim count and loss indices.

## **DRAFT**

Weights are derived based upon the following assumptions:

- Statistics exceeding 2 times retained limit receive more weight than statistics exceeding 1 times retained limit, assuming those members who penetrate the pool layer more deeply should be considered more seriously for retained limit changes.
- Ten-year statistics receive more weight than Five-year statistics, assuming retained limit changes should be based more on long-term statistics than short-term. All statistics are annualized before indexing.
- Closed claim and paid loss statistics are given more weight than Reported claim and incurred loss statistics, assuming that retained limit changes should be based more on closed/paid losses given the uncertainty in case reserve estimates.
- Claim count statistics are given more weight than loss statistics assuming frequency should receive more weight than severity.

A combined index between -1.00 and 0.00 indicates a lower retained limit may be appropriate. A combined index between 0.00 and +1.00 indicates a higher retained limit may be appropriate. For stability, we recommend focusing attention on those members with a combined index between +0.7 and +1.0 for increases, and those members with a combined index between -0.7 and -1.0 for decreases.

It should be noted that changes in one member's retained limit, also changes the pool averages for all relevant statistics. As a result, the process of determining the appropriate retained limit for all members is iterative. Thus although Member X may initially have a combined index between -0.7 and +0.7, indicating no significant need for change, the revision of Member Y's retained limit may change the pool statistics enough to result in a new combined index outside that range for Member X, indicating the need for a change in retained limit.

## DRAFT

A summary of the weighted indices at the current retained limit (first iteration only) are shown below for those members with strong indications either up or down:

<u>Member</u>	<u>Current Retained Limit</u>	<u>Claim Count Index</u>	<u>Loss Index</u>	<u>Combined Index</u>
<b>Increase Indicated</b>				
Benicia	25,000	+1.00	+0.60	+0.90
<b>Decrease Indicated</b>				
Portola Valley	25,000	-0.67	-1.00	-0.75
Newark	100,000	-0.67	-1.00	-0.75
Cupertino	250,000	-0.67	-1.00	-0.75

As shown, based upon the burn approach (Exhibit 2, Page 7), statistics indicate an increase in retained limit for Benicia; and a decrease for Portola Valley, Newark and Cupertino.

### Summary

A summary of the findings are as follows:

- Benicia (\$25,000) may be more appropriate for a higher retained limit. This is indicated by both the size and burn approaches (Exhibit 1, Page 4 and Exhibit 2, Page 7).
- Cupertino (\$250,000) may be more appropriate for a lower retained limit. This is indicated by both the size and burn approaches (Exhibit 1, Page 4 and Exhibit 2, Page 7).
- Portola Valley (\$25,000) and Newark (\$100,000) may be more appropriate for a lower retained limit. This is indicated by the burn approach (Exhibit 2, Page 7).

Note that these observations identify members for which certain statistics indicate a change from one retained limit to another might be appropriate. There may be other qualitative information which provides a reasonable rationale for maintaining the current retained limit. These reasons may include a member's desire to retain more risk than indicated by the loss data, or a change in member operations which may lead to fewer losses than contained in the historical loss data.

**DRAFT**

This report should be viewed as a supplement to our most recent actuarial review of the Authority's self-insured liability program (as documented in our May 9, 2013 report.) As such the limitations and conditions described in that report also apply to the estimates presented in this update.

We appreciate the opportunity to be of service to ABAG PLAN in preparing this report. Please feel free to call Mike Harrington at (916) 244-1162 or Becky Richard at (916) 244-1183 with any questions you may have concerning this report.

Sincerely,

Bickmore

**DRAFT**

---

Mike Harrington, FCAS, MAAA  
Director, Property and Casualty Actuarial Services, Bickmore  
Fellow, Casualty Actuarial Society  
Member, American Academy of Actuaries

**DRAFT**

---

Becky Richard, ACAS, MAAA  
Manager, Property and Casualty Actuarial Services, Bickmore  
Associate, Casualty Actuarial Society  
Member, American Academy of Actuaries

ABAG PLAN

LIABILITY

Member Retained Limit Analysis - Ground Up Losses  
Exposure, Claim Count, and Loss Statistics (Aggregate)

1-2012 Enrollment (C)	02/03-11/12 Non-Zero Reported Claims (D)	07/08-11/12 Non-Zero Reported Claims (E)	02/03-11/12 Non-Zero Closed Claims (F)	07/08-11/12 Non-Zero Closed Claims (G)	02/03-11/12 Incurred Losses Capped at \$50K (H)	07/08-11/12 Incurred Losses Capped at \$50K (I)	02/03-11/12 Paid Losses Capped at \$50K (J)	07/08-11/12 Paid Losses Capped at \$50K (K)
398,066	49	18	44	13	425,697	101,099	357,948	33,350
781,578	21	10	17	7	259,501	193,618	201,658	135,774
388,627	192	88	176	72	1,842,443	879,612	1,691,571	728,741
332,097	6	4	3	1	76,430	60,100	66,330	50,000
156,406	1	0	1	0	138	0	138	0
523,692	11	4	11	4	226,651	58,660	226,651	58,660
319,467	25	12	24	11	379,704	279,014	379,382	278,692
569,921	65	35	59	29	513,945	354,875	418,690	259,620
223,190	9	5	6	2	87,734	56,578	87,634	56,478
366,710	22	6	21	5	284,106	124,880	235,346	76,121
309,808	33	17	28	12	376,055	201,483	351,465	176,892
759,275	105	53	94	42	1,098,368	622,224	990,842	514,699
502,769	20	10	19	9	275,525	161,541	225,525	111,541
533,432	95	38	90	33	860,648	364,369	744,109	247,830
746,832	89	40	85	36	834,026	378,899	790,121	334,994
132,348	128	50	124	46	1,263,030	305,360	1,238,030	280,360
204,841	12	9	9	6	145,773	142,727	97,832	94,786
361,309	55	28	50	23	546,914	198,996	513,873	165,955
360,210	75	35	65	25	1,030,948	492,676	885,538	347,266
327,241	60	26	55	22	422,246	262,989	306,060	146,803
504,323	84	40	76	32	785,416	352,382	739,258	306,224
449,054	161	78	155	72	898,194	368,888	832,022	302,716
587,463	118	62	107	51	1,198,690	601,038	1,112,054	514,403
319,608	109	42	96	30	732,737	478,734	563,986	310,032
368,991	180	92	160	72	1,901,902	1,041,653	1,597,937	737,688
368,389	159	71	147	59	1,607,579	474,594	1,581,870	448,885
283,545	161	76	138	53	1,935,008	705,070	1,694,292	464,353
194,611	315	144	291	121	2,690,523	1,126,083	2,359,557	799,207
390,429	57	29	53	25	556,994	148,727	452,979	44,713
364,231	2,417	1,122	2,204	913	23,256,924	10,536,869	20,742,700	8,026,784

12.

ABAG PLAN

LIABILITY

Member Retained Limit Analysis - Ground Up Losses  
Exposure, Claim Count, and Loss Statistics (Annual)

1-2012 Enrollment (C)	02/03-11/12 Non-Zero Reported Claims (D)	07/08-11/12 Non-Zero Reported Claims (E)	02/03-11/12 Non-Zero Closed Claims (F)	07/08-11/12 Non-Zero Closed Claims (G)	02/03-11/12 Incurred Losses Capped at \$50K (H)	07/08-11/12 Incurred Losses Capped at \$50K (I)	02/03-11/12 Paid Losses Capped at \$50K (J)	07/08-11/12 Paid Losses Capped at \$50K (K)
398,066	4.9	3.6	4.4	2.6	42,570	20,220	35,795	6,670
781,578	2.1	2.0	1.7	1.4	25,950	38,724	20,166	27,155
388,627	19.2	17.6	17.6	14.4	184,244	175,922	169,157	145,748
332,097	0.6	0.8	0.3	0.2	7,643	12,020	6,633	10,000
156,406	0.1	0.0	0.1	0.0	14	0	14	0
523,692	1.1	0.8	1.1	0.8	22,665	11,732	22,665	11,732
319,467	2.5	2.4	2.4	2.2	37,970	55,803	37,938	55,738
569,921	6.5	7.0	5.9	5.8	51,395	70,975	41,869	51,924
223,190	0.9	1.0	0.6	0.4	8,773	11,316	8,763	11,296
366,710	2.2	1.2	2.1	1.0	28,411	24,976	23,535	15,224
309,808	3.3	3.4	2.8	2.4	37,606	40,297	35,147	35,378
759,275	10.5	10.6	9.4	8.4	109,837	124,445	99,084	102,940
502,769	2.0	2.0	1.9	1.8	27,553	32,308	22,553	22,308
533,432	9.5	7.6	9.0	6.6	86,065	72,874	74,411	49,566
746,832	8.9	8.0	8.5	7.2	83,403	75,780	79,012	66,999
132,348	12.8	10.0	12.4	9.2	126,303	61,072	123,803	56,072
204,841	1.2	1.8	0.9	1.2	14,577	28,545	9,783	18,957
061,309	5.5	5.6	5.0	4.6	54,691	39,799	51,387	33,191
860,210	7.5	7.0	6.5	5.0	103,095	98,535	88,554	69,453
827,241	6.0	5.2	5.5	4.4	42,225	52,598	30,606	29,361
504,323	8.4	8.0	7.6	6.4	78,542	70,476	73,926	61,245
449,054	16.1	15.6	15.5	14.4	89,819	73,778	83,202	60,543
587,463	11.8	12.4	10.7	10.2	119,869	120,208	111,205	102,881
319,608	10.9	8.4	9.6	6.0	73,274	95,747	56,399	62,006
368,991	18.0	18.4	16.0	14.4	190,190	208,331	159,794	147,538
368,389	15.9	14.2	14.7	11.8	160,758	94,919	158,187	89,777
283,545	16.1	15.2	13.8	10.6	193,501	141,014	169,429	92,871
194,611	31.5	28.8	29.1	24.2	269,052	225,217	235,956	159,841
390,429	5.7	5.8	5.3	5.0	55,699	29,745	45,298	8,943
364,231	241.7	224.4	220.4	182.6	2,325,692	2,107,374	2,074,270	1,605,357

5 as appropriate.

ABAG PLAN

LIABILITY

Member Retained Limit Analysis - Ground Up Losses  
Exposure, Claim Count, and Loss Statistics (Rankings)

	02/03-11/12 Non-Zero Reported Claims (D)	07/08-11/12 Non-Zero Reported Claims (E)	02/03-11/12 Non-Zero Closed Claims (F)	07/08-11/12 Non-Zero Closed Claims (G)	02/03-11/12 Incurred Losses Capped at \$50K (H)	07/08-11/12 Incurred Losses Capped at \$50K (I)	02/03-11/12 Paid Losses Capped at \$50K (J)	02/03-11/12 Paid Losses Capped at \$50K (K)	Weighted Rank (L)
0	19	19	19	19	18	25	19	28	20.1
3	23	22	24	23	24	20	25	20	22.9
9	2	3	2	2	4	3	3	3	5.2
7	28	27	28	28	28	26	28	26	27.3
9	29	29	29	29	29	29	29	29	29.0
5	26	27	25	26	25	27	23	24	25.4
1	21	21	21	21	20	16	18	14	20.2
9	15	14	15	14	17	13	17	15	16.5
6	27	26	27	27	27	28	27	25	26.5
2	22	25	22	25	22	24	22	23	22.8
7	20	20	20	20	21	18	20	17	18.6
4	10	8	10	9	8	5	8	4	6.6
8	24	22	23	22	23	21	24	21	24.8
4	11	13	11	11	11	12	12	16	12.8
1	12	11	12	10	12	10	11	9	11.0
7	7	9	7	8	6	15	6	13	7.9
4	25	24	26	24	26	23	26	22	24.4
8	18	17	18	17	16	19	15	18	13.6
5	14	14	14	15	9	7	9	8	13.4
6	16	18	16	18	18	19	17	19	13.0
6	13	11	13	12	13	14	13	11	13.9
2	4	4	4	2	10	11	10	12	4.4
0	8	7	8	7	7	6	7	5	8.3
3	9	10	9	13	14	8	14	10	11.6
5	3	2	3	2	3	2	4	2	3.6
8	6	6	5	5	5	9	5	7	10.7
1	4	5	6	6	2	4	2	6	3.2
3	1	1	1	1	1	1	1	1	1.8
2	17	16	17	15	15	22	16	27	15.3
%	10.0%	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	5.0%	100.0%

1) to least (29).

ABAG PLAN

LIABILITY

Member Retained Limit Analysis - Ground Up Losses  
Current vs. Weighted Ranks for Indicated Change In Retained Limit

Member (A)	Current Retained Limit (B)	Weighted Rank (C)	Current Rank (D)	Difference (E)
American Canyon	25,000	10	7	+3
Atherton	25,000	7	5	+2
Benicia	25,000	25	9	+16
Los Altos Hills	25,000	2	2	
Portola Valley	25,000	1	1	
Ross	25,000	4	4	
Saratoga	25,000	9	6	+3
Suisun City	25,000	12	8	+4
Woodside	25,000	3	3	
Colma	50,000	8	12	-4
Dublin	50,000	11	13	-2
Gilroy	50,000	24	17	+7
Half Moon Bay	50,000	5	10	-5
Hillsborough	50,000	18	14	+4
Los Gatos	50,000	20	15	+5
Pacifica	50,000	23	16	+7
Tiburon	50,000	6	11	-5
Campbell	100,000	15	19	-4
East Palo Alto	100,000	16	20	-4
Foster City	100,000	17	21	-4
Millbrae	100,000	14	18	-4
Milpitas	100,000	26	25	+1
Morgan Hill	100,000	22	24	-2
Newark	100,000	19	22	-3
San Bruno	100,000	27	26	+1
San Carlos	100,000	21	23	-2
South SF	100,000	28	27	+1
Burlingame	250,000	29	29	
Cupertino	250,000	13	28	-15

(C) Provided By ABAG PLAN.

(C) Exhibit 1, Page 3 weighted rank from least (1) to greatest (29).

(D) Current SIR rank from least (1) to greatest (29).

(E) Difference in ranks from columns (C) and (D).

ABAG PLAN

LIABILITY

Member Retained Limit Analysis - Pooled Losses  
Claim Count Statistics (Aggregate)

Current Retained Limit (B)	(C)	02/03-11/12	07/08-11/12	02/03-11/12	07/08-11/12	02/03-11/12	07/08-11/12	02/03-11/12	07/08-11/12	02/03-11/12	07/08-11/12
		Non-Zero Closed Claims Over Limit (D)	Non-Zero Closed Claims Over Limit (E)	Non-Zero Closed Claims Over 2 X Limit (F)	Non-Zero Closed Claims Over 2 X Limit (G)	Non-Zero Reported Claims Over Limit (H)	Non-Zero Reported Claims Over Limit (I)	Non-Zero Reported Claims Over 2 X Limit (J)	Non-Zero Reported Claims Over 2 X Limit (K)		
25,000		6	0	6	0	7	1	6	0		
25,000		3	3	2	2	5	4	4	3		
25,000		24	9	17	6	28	13	21	10		
25,000		1	1	1	1	1	1	1	1		
25,000		0	0	0	0	0	0	0	0		
25,000		4	1	4	1	4	1	4	1		
25,000		7	5	6	5	7	5	6	5		
25,000		4	3	3	2	7	6	6	5		
25,000		1	0	0	0	2	1	1	1		
50,000		2	0	1	0	3	1	2	1		
50,000		3	0	1	0	4	1	2	1		
50,000		10	6	5	4	11	7	6	5		
50,000		3	2	0	0	4	3	1	1		
50,000		7	3	4	1	10	6	7	4		
50,000		4	1	4	1	8	5	8	5		
50,000		13	1	5	1	14	2	6	2		
50,000		0	0	0	0	2	2	2	2		
100,000		3	2	1	1	3	2	1	1		
100,000		2	0	2	0	5	3	4	2		
100,000		0	0	0	0	3	2	1	1		
100,000		3	1	2	0	3	1	2	0		
100,000		4	1	3	1	5	2	3	1		
100,000		7	2	5	1	12	7	6	2		
100,000		0	0	0	0	1	0	0	0		
100,000		4	3	2	2	8	7	3	3		
100,000		10	4	4	0	10	4	4	0		
100,000		8	0	4	0	11	3	6	2		
250,000		0	0	0	0	3	3	0	0		
250,000		0	0	0	0	1	1	0	0		
		133	48	82	29	182	94	113	59		

31, 2012.

ABAG PLAN

LIABILITY

Member Retained Limit Analysis - Pooled Losses  
Claim Count Statistics (Annual)

Current Retained Limit (B)	(C)	02/03-11/12	07/08-11/12	02/03-11/12	07/08-11/12	02/03-11/12	07/08-11/12	02/03-11/12	07/08-11/12	02/03-11/12	07/08-11/12
		Non-Zero Closed Claims Over Limit (D)	Non-Zero Closed Claims Over Limit (E)	Non-Zero Closed Claims Over 2 X Limit (F)	Non-Zero Closed Claims Over 2 X Limit (G)	Non-Zero Reported Claims Over Limit (H)	Non-Zero Reported Claims Over Limit (I)	Non-Zero Reported Claims Over 2 X Limit (J)	Non-Zero Reported Claims Over 2 X Limit (K)		
25,000		0.60	0.00	0.60	0.00	0.70	0.20	0.60	0.00		
25,000		0.30	0.60	0.20	0.40	0.50	0.80	0.40	0.60		
25,000		2.40	1.80	1.70	1.20	2.80	2.60	2.10	2.00		
25,000		0.10	0.20	0.10	0.20	0.10	0.20	0.10	0.20		
25,000		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
25,000		0.40	0.20	0.40	0.20	0.40	0.20	0.40	0.20		
25,000		0.70	1.00	0.60	1.00	0.70	1.00	0.60	1.00		
25,000		0.40	0.60	0.30	0.40	0.70	1.20	0.60	1.00		
25,000		0.10	0.00	0.00	0.00	0.20	0.20	0.10	0.20		
50,000		0.20	0.00	0.10	0.00	0.30	0.20	0.20	0.20		
50,000		0.30	0.00	0.10	0.00	0.40	0.20	0.20	0.20		
50,000		1.00	1.20	0.50	0.80	1.10	1.40	0.60	1.00		
50,000		0.30	0.40	0.00	0.00	0.40	0.60	0.10	0.20		
50,000		0.70	0.60	0.40	0.20	1.00	1.20	0.70	0.80		
50,000		0.40	0.20	0.40	0.20	0.80	1.00	0.80	1.00		
50,000		1.30	0.20	0.50	0.20	1.40	0.40	0.60	0.40		
50,000		0.00	0.00	0.00	0.00	0.20	0.40	0.20	0.40		
100,000		0.30	0.40	0.10	0.20	0.30	0.40	0.10	0.20		
100,000		0.20	0.00	0.20	0.00	0.50	0.60	0.40	0.40		
100,000		0.00	0.00	0.00	0.00	0.30	0.40	0.10	0.20		
100,000		0.30	0.20	0.20	0.00	0.30	0.20	0.20	0.00		
100,000		0.40	0.20	0.30	0.20	0.50	0.40	0.30	0.20		
100,000		0.70	0.40	0.50	0.20	1.20	1.40	0.60	0.40		
100,000		0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00		
100,000		0.40	0.60	0.20	0.40	0.80	1.40	0.30	0.60		
100,000		1.00	0.80	0.40	0.00	1.00	0.80	0.40	0.00		
100,000		0.80	0.00	0.40	0.00	1.10	0.60	0.60	0.40		
250,000		0.00	0.00	0.00	0.00	0.30	0.60	0.00	0.00		
250,000		0.00	0.00	0.00	0.00	0.10	0.20	0.00	0.00		
		13.30	9.60	8.20	5.80	18.20	18.80	11.30	11.80		
		0.46	0.33	0.28	0.20	0.63	0.65	0.39	0.41		
25% of Avg		0.11	0.00	0.07	0.00	0.16	0.00	0.10	0.00		
300% of Avg		1.38	0.99	0.85	0.60	1.88	1.94	1.17	1.22		

31, 2012.

ABAG PLAN

LIABILITY

Member Retained Limit Analysis - Pooled Losses  
Loss Statistics (Aggregate)

Current Retained Limit (B)	(C)	02/03-11/12 Paid Over Limit (D)	07/08-11/12 Paid Over Limit (E)	02/03-11/12 Paid Over 2 X Limit (F)	07/08-11/12 Paid Over 2 X Limit (G)	02/03-11/12 Incurred Over Limit (H)	07/08-11/12 Incurred Over Limit (I)	02/03-11/12 Incurred Over 2 X Limit (J)	07/08-11/12 Incurred Over 2 X Limit (K)
25,000		813,183	0	663,183	0	828,183	15,000	663,183	0
25,000		1,662,417	1,602,330	1,584,568	1,549,482	2,007,330	1,927,330	1,904,482	1,849,482
25,000		2,870,203	1,686,567	2,321,518	1,433,527	8,488,819	7,305,183	7,885,867	6,997,876
25,000		244,522	244,522	219,522	219,522	244,522	244,522	219,522	219,522
25,000		0	0	0	0	0	0	0	0
25,000		2,849,905	56,742	2,749,905	31,742	2,849,905	56,742	2,749,905	31,742
25,000		655,689	246,222	501,689	121,222	655,689	246,222	501,689	121,222
25,000		175,357	119,902	66,608	36,153	846,681	791,226	694,608	664,153
25,000		312,000	310,261	285,261	285,261	351,789	350,050	325,050	325,050
50,000		220,086	0	161,136	0	445,086	225,000	336,136	175,000
50,000		328,996	187,307	200,576	137,307	2,442,210	2,300,521	2,313,790	2,250,521
50,000		3,910,636	3,801,831	3,493,263	3,470,828	3,916,585	3,807,780	3,499,212	3,476,776
50,000		69,221	55,559	0	0	169,271	155,609	50,050	50,050
50,000		831,913	111,325	558,527	1,498	1,283,637	563,049	860,250	303,221
50,000		863,225	611,541	563,225	461,541	7,333,905	7,082,221	6,933,905	6,832,221
50,000		1,599,369	235,284	1,135,613	135,284	1,821,006	456,921	1,357,250	356,921
50,000		79,973	79,973	29,973	29,973	260,000	260,000	160,000	160,000
100,000		348,629	333,255	211,902	211,902	348,629	333,255	211,902	211,902
100,000		332,546	43,946	88,600	0	2,043,600	1,755,001	1,548,600	1,460,001
100,000		19,963	0	0	0	310,000	250,000	100,000	100,000
100,000		4,777,184	2,111	4,575,073	0	4,975,184	2,111	4,773,073	0
100,000		946,339	424,758	631,099	324,758	996,339	474,758	631,099	324,758
100,000		1,643,150	189,068	1,075,705	30,373	2,840,200	1,386,118	1,995,705	950,373
100,000		18,702	0	0	0	27,000	0	0	0
100,000		605,881	586,518	254,272	254,272	962,145	942,782	390,536	390,536
100,000		1,142,633	175,881	484,670	0	1,142,633	175,881	484,670	0
100,000		3,143,150	36,246	2,490,802	0	4,710,670	1,603,765	3,794,567	1,303,765
250,000		0	0	0	0	300,000	300,000	0	0
250,000		0	0	0	0	150,000	150,000	0	0
		30,464,873	11,141,150	24,346,691	8,734,645	52,751,019	33,161,047	44,385,052	28,555,093

31, 2012.

ABAG PLAN

LIABILITY

Member Retained Limit Analysis - Pooled Losses  
Loss Statistics (Annual)

Current Retained Limit (B)	(C)	02/03-11/12 Paid Over Limit (D)	07/08-11/12 Paid Over Limit (E)	02/03-11/12 Paid Over 2 X Limit (F)	07/08-11/12 Paid Over 2 X Limit (G)	02/03-11/12 Incurred Over Limit (H)	07/08-11/12 Incurred Over Limit (I)	02/03-11/12 Incurred Over 2 X Limit (J)	07/08-11/12 Incurred Over 2 X Limit (K)
25,000		81,318	0	66,318	0	82,818	3,000	66,318	0
25,000		166,242	320,466	158,457	309,896	200,733	385,466	190,448	369,896
25,000		287,020	337,313	232,152	286,705	848,882	1,461,037	788,587	1,399,575
25,000		24,452	48,904	21,952	43,904	24,452	48,904	21,952	43,904
25,000		0	0	0	0	0	0	0	0
25,000		284,991	11,348	274,991	6,348	284,991	11,348	274,991	6,348
25,000		65,569	49,244	50,169	24,244	65,569	49,244	50,169	24,244
25,000		17,536	23,980	6,661	7,231	84,668	158,245	69,461	132,831
25,000		31,200	62,052	28,526	57,052	35,179	70,010	32,505	65,010
50,000		22,009	0	16,114	0	44,509	45,000	33,614	35,000
50,000		32,900	37,461	20,058	27,461	244,221	460,104	231,379	450,104
50,000		391,064	760,366	349,326	694,166	391,658	761,556	349,921	695,355
50,000		6,922	11,112	0	0	16,927	31,122	5,005	10,010
50,000		83,191	22,265	55,853	300	128,364	112,610	86,025	60,644
50,000		86,323	122,308	56,323	92,308	733,391	1,416,444	693,391	1,366,444
50,000		159,937	47,057	113,561	27,057	182,101	91,384	135,725	71,384
50,000		7,997	15,995	2,997	5,995	26,000	52,000	16,000	32,000
100,000		34,863	66,651	21,190	42,380	34,863	66,651	21,190	42,380
100,000		33,255	8,789	8,860	0	204,360	351,000	154,860	292,000
100,000		1,996	0	0	0	31,000	50,000	10,000	20,000
100,000		477,718	422	457,507	0	497,518	422	477,307	0
100,000		94,634	84,952	63,110	64,952	99,634	94,952	63,110	64,952
100,000		164,315	37,814	107,571	6,075	284,020	277,224	199,571	190,075
100,000		1,870	0	0	0	2,700	0	0	0
100,000		60,588	117,304	25,427	50,854	96,215	188,556	39,054	78,107
100,000		114,263	35,176	48,467	0	114,263	35,176	48,467	0
100,000		314,315	7,249	249,080	0	471,067	320,753	379,457	260,753
250,000		0	0	0	0	30,000	60,000	0	0
250,000		0	0	0	0	15,000	30,000	0	0
		3,046,487	2,228,230	2,434,669	1,746,929	5,275,102	6,632,209	4,438,505	5,711,019
		106,481	94,812	93,247	81,709	180,810	243,028	166,048	226,868
25% of Avg		26,620	23,703	23,312	20,427	45,203	60,757	41,512	56,717
300% of Avg		319,443	284,436	279,742	245,127	542,431	729,085	498,144	680,603
		104,408	68,746	79,772	50,577	182,390	222,248	147,204	183,460
25% of Avg		26,102	17,187	19,943	12,644	45,598	55,562	36,801	45,865
300% of Avg		313,224	206,238	239,317	151,732	547,171	666,743	441,611	550,381

31, 2012.

ABAG PLAN

LIABILITY

Member Retained Limit Analysis - Pooled Losses  
Change Index Based on Claim Count Statistics

Current Retained Limit (B)	02/03-11/12 Non-Zero Closed Claims Over Limit (C)	07/08-11/12 Non-Zero Closed Claims Over Limit (D)	02/03-11/12 Non-Zero Closed Claims Over 2 X Limit (E)	07/08-11/12 Non-Zero Closed Claims Over 2 X Limit (F)	02/03-11/12 Non-Zero Reported Claims Over Limit (G)	07/08-11/12 Non-Zero Reported Claims Over Limit (H)	02/03-11/12 Non-Zero Reported Claims Over 2 X Limit (I)	07/08-11/12 Non-Zero Reported Claims Over 2 X Limit (J)
25,000								
25,000								
25,000	+1	+1	+1	+1	+1	+1	+1	+1
25,000	-1				-1			
25,000	-1		-1		-1		-1	
25,000		+1						+1
25,000								
25,000	-1		-1					
50,000								
50,000		+1						+1
50,000			-1					
50,000								
50,000								
50,000	-1		-1					
100,000								
100,000	-1		-1					
100,000								
100,000								
100,000	-1		-1		-1		-1	
100,000								
100,000								
100,000	-1		-1				-1	
250,000	-1		-1				-1	
250,000	-1		-1		-1		-1	
	13.33%	6.67%	26.67%	13.33%	8.89%	4.44%	17.78%	8.89%

and averages from Exhibit 2, Page 2. Member statistic < lower limit --> -1, Member statistic > upper limit --> +1

ABAG PLAN

LIABILITY

Member Retained Limit Analysis - Pooled Losses  
Change Index Based on Loss Statistics

Current Retained Limit (B)	02/03-11/12 Paid Over Limit (C)	07/08-11/12 Paid Over Limit (D)	02/03-11/12 Paid Over 2 X Limit (E)	07/08-11/12 Paid Over 2 X Limit (F)	02/03-11/12 Incurred Over Limit (G)	07/08-11/12 Incurred Over Limit (H)	02/03-11/12 Incurred Over 2 X Limit (I)	07/08-11/12 Incurred Over 2 X Limit (J)
25,000		-1		-1		-1		-1
25,000		+1		+1				
25,000		+1		+1	+1	+1	+1	+1
25,000	-1				-1	-1	-1	-1
25,000	-1	-1	-1	-1	-1	-1	-1	-1
25,000		-1	+1	-1		-1		-1
25,000						-1		-1
25,000	-1		-1	-1				
25,000	-1	-1	-1	-1	-1	-1	-1	-1
50,000	-1	-1	-1	-1	-1	-1	-1	-1
50,000	+1	+1	+1	+1		+1		+1
50,000	-1	-1	-1	-1	-1	-1	-1	-1
50,000								
50,000					+1	+1	+1	+1
50,000	-1	-1	-1	-1	-1	-1	-1	-1
100,000					-1		-1	-1
100,000	-1	-1	-1	-1	-1	-1	-1	-1
100,000	+1	-1	+1	-1		-1	+1	-1
100,000								
100,000	-1	-1	-1	-1	-1	-1	-1	-1
100,000								
100,000						-1		-1
100,000	+1	-1	+1	-1				
250,000	-1	-1	-1	-1	-1	-1	-1	-1
250,000	-1	-1	-1	-1	-1	-1	-1	-1
	13.33%	6.67%	26.67%	13.33%	8.89%	4.44%	17.78%	8.89%

and averages from Exhibit 2, Page 4. Member statistic < lower limit --> -1, Member statistic > upper limit --> +1

ABAG PLAN

LIABILITY

Member Retained Limit Analysis - Pooled Losses  
Weighted Indices for Indicated Change In Retained Limit

Member (A)	Current Retained Limit (B)	Claim Count Index (C)	Loss Index (D)	Combined Index (E)
American Canyon	25,000		-0.33	-0.08
Atherton	25,000		+0.20	+0.05
Benicia	25,000	+1.00	+0.60	+0.90
Los Altos Hills	25,000	-0.22	-0.53	-0.30
Portola Valley	25,000	-0.67	-1.00	-0.75
Ross	25,000		-0.07	-0.02
Saratoga	25,000	+0.20	-0.13	+0.12
Suisun City	25,000		-0.53	-0.13
Woodside	25,000	-0.40	-0.27	-0.37
Colma	50,000		-1.00	-0.25
Dublin	50,000			
Gilroy	50,000	+0.20	+0.73	+0.33
Half Moon Bay	50,000	-0.27	-1.00	-0.45
Hillsborough	50,000		-0.13	-0.03
Los Gatos	50,000		+0.40	+0.10
Pacifica	50,000			
Tiburon	50,000	-0.40	-1.00	-0.55
Campbell	100,000		-0.36	-0.09
East Palo Alto	100,000		-0.47	-0.12
Foster City	100,000	-0.40	-1.00	-0.55
Millbrae	100,000		+0.24	+0.06
Milpitas	100,000			
Morgan Hill	100,000		-0.13	-0.03
Newark	100,000	-0.67	-1.00	-0.75
San Bruno	100,000			
San Carlos	100,000		-0.27	-0.07
South SF	100,000		+0.20	+0.05
Burlingame	250,000	-0.58	-0.96	-0.67
Cupertino	250,000	-0.67	-1.00	-0.75
Weight		75%	25%	100%

(B) Provided By ABAG PLAN.

(C) Claim Count Index based on indices and weights from Exhibit 2, Page 5.

(D) Loss Index based on indices and weights from Exhibit 2, Page 6.

(E) Combined Index based on indices and weights from columns (C) and (D).

# AGENDA ITEM

## #9

Other Business



## ABAG PLAN MEMBERS BOARD RETREAT

### SAVE THE DATE

**Who:** Board Members of ABAG PLAN

**What:** Board Retreat

**When:** Friday, December 6th, 2013

**Time:** 10 o'clock am - 4:00 pm

**Where:** Hilton Garden Inn

San Francisco Airport North

670 Gateway Blvd. South San Francisco, CA 94080

**There are several transportation options to get to the hotel:**

**BART:** Take BART to the San Francisco Airport, the complimentary hotel shuttle will bring you to and from hotel. When arriving at the Airport, go upstairs to the Departure Level, stand in center island for Hotel Shuttle service, and call hotel main line @ [650\) 872-1515](tel:6508721515) and let them know you are attending a Board Meeting, and are ready to get picked up..

**Caltrain:** There is a Caltrain station 5 Minutes away from hotel, the complimentary hotel shuttle can bring you to and from the hotel. Call [650\) 872-1515](tel:6508721515) and let them know you are attending a Board Meeting, and are ready to get picked up..

**Drive:** Map Attached

**\*PLEASE RSVP by COB, Friday October 11th, 2013**

---

*\*For those of you that are planning on staying at the hotel over the weekend, you can make a reservation:*

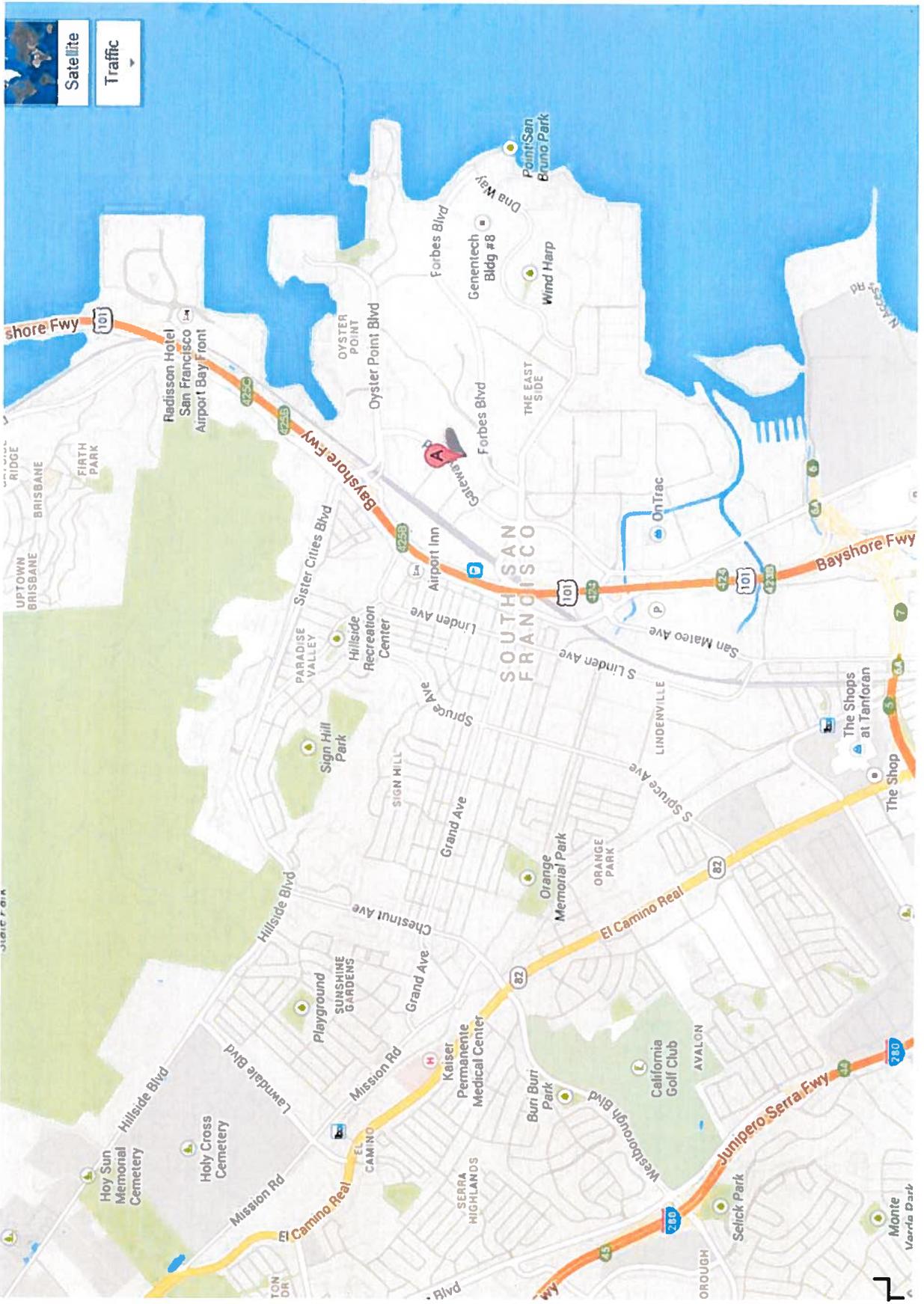
**Online at:** [HGI.com](http://HGI.com)

**Toll Free:** 877-STAY-HGI

**Hotel direct:** [650-872-1515](tel:6508721515)

Hotel Website: [www.sanfranciscoairportnorth.stayhgi.com](http://www.sanfranciscoairportnorth.stayhgi.com)

---



Satellite  
Traffic

shore Fwy 101  
Radisson Hotel San Francisco Airport Bay Front  
Oyster Point  
Oyster Point Blvd  
Forbes Blvd  
Genentech Bldg #8  
Wind Harp  
Point San Bruno Park  
Dna Way  
THE EAST SIDE  
SOUTH SAN FRANCISCO  
Bayshore Fwy 101  
Sister Cities Blvd  
Hillside Recreation Center  
Airport Inn  
Linden Ave  
San Mateo Ave  
Bayshore Fwy 101  
S Spruce Ave  
LINDENVILLE  
The Shops at Tanforan  
The Shop  
Orange Memorial Park  
ORANGE PARK  
El Camino Real 82  
SUNSHINE GARDENS  
Playground  
Kaiser Permanente Medical Center  
California Golf Club  
AVALON  
Junipero Serra Fwy 280  
Westborough Blvd  
Setick Park  
Monte Vista Park  
Hoy Sun Memorial Cemetery  
Holy Cross Cemetery  
Mesa Drive  
Hillside Blvd  
Lamdale Blvd  
Mission Rd  
Mesa Drive  
SERRA HIGHLANDS  
Buri Buri Park  
Westborough Blvd  
OROUGH