

**Imperial Valley College  
Actuarial Study of  
Retiree Health Liabilities  
As of September 1, 2013**

*Prepared by:  
Total Compensation Systems, Inc.*

*Date: June 9, 2014*



**Imperial Valley College  
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**PART I: EXECUTIVE SUMMARY**

**A. Introduction**

Imperial Valley College engaged Total Compensation Systems, Inc. (TCS) to analyze liabilities associated with its current retiree health program as of September 1, 2013 (the valuation date). The numbers in this report are based on the assumption that they will first be used to determine accounting entries for the fiscal year ending June 30, 2014. If the report will first be used for a different fiscal year, the numbers will need to be adjusted accordingly.

This report does not reflect any cash benefits paid unless the retiree is required to provide proof that the cash benefits are used to reimburse the retiree's cost of health benefits. Cost benefits paid to retirees are reportable under Governmental Accounting Standards Board (GASB) Standards 25/27.

This actuarial study is intended to serve the following purposes:

To provide information to enable Imperial Valley CCD to manage the costs and liabilities associated with its retiree health benefits.

To provide information to enable Imperial Valley CCD to communicate the financial implications of retiree health benefits to internal financial staff, the Board, employee groups and other affected parties.

To provide information needed to comply with Governmental Accounting Standards Board Accounting Standards 43 and 45 related to "other postemployment benefits" (OPEB's).

Because this report was prepared in compliance with GASB 43 and 45, as appropriate, Imperial Valley CCD should not use this report for any other purpose without discussion with TCS. This means that any discussions with employee groups, governing Boards, etc. should be restricted to the implications of GASB 43 and 45 compliance.

This actuarial report includes several estimates for Imperial Valley CCD's retiree health program. In addition to the tables included in this report, we also performed cash flow adequacy tests as required under Actuarial Standard of Practice 6 (ASOP 6). Our cash flow adequacy testing covers a twenty-year period. We would be happy to make this cash flow adequacy test available to Imperial Valley CCD in spreadsheet format upon request.

We calculated the following estimates separately for active employees and retirees. As requested, we also separated results by the following employee classifications: Classified, Certificated and Management. We estimated the following:

the total liability created. (The actuarial present value of total projected benefits or APVTPB)

the ten year "pay-as-you-go" cost to provide these benefits.

the "actuarial accrued liability (AAL)." (The AAL is the portion of the APVTPB attributable to employees' service prior to the valuation date.)

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the amount necessary to amortize the UAAL over a period of 30 years.

the annual contribution required to fund retiree benefits over the working lifetime of eligible employees (the "normal cost").

The Annual Required Contribution (ARC) which is the basis of calculating the annual OPEB cost and net OPEB obligation under GASB 43 and 45.

We summarized the data used to perform this study in Appendix A. No effort was made to verify this information beyond brief tests for reasonableness and consistency.

All cost and liability figures contained in this study are estimates of future results. Future results can vary dramatically and the accuracy of estimates contained in this report depends on the actuarial assumptions used. Normal costs and liabilities could easily vary by 10 - 20% or more from estimates contained in this report.

### **B. General Findings**

We estimate the "pay-as-you-go" cost of providing retiree health benefits in the year beginning September 1, 2013 to be \$1,577,263 (see Section IV.A.). The "pay-as-you-go" cost is the cost of benefits for current

For current employees, the value of benefits "accrued" in the year beginning September 1, 2013 (the normal cost) is \$1,521,712. This normal cost would increase each year based on covered payroll. Had Imperial Valley CCD begun accruing retiree health benefits when each current employee and retiree was hired, a substantial liability would have accumulated. We estimate the amount that would have accumulated to be \$38,931,924. This amount is called the "actuarial accrued liability" (AAL). The remaining unamortized balance of the initial unfunded AAL (UAAL) is \$33,607,505. This leaves a "residual" of \$5,324,419.

We calculated the annual cost to amortize the residual unfunded actuarial accrued liability using a 4.75% discount rate. We used an open 30 year amortization period. The current year cost to amortize the residual unfunded actuarial accrued liability is \$336,554.

Combining the normal cost with both the initial and residual UAAL amortization costs produces an annual required contribution (ARC) of \$3,563,326. The ARC is used as the basis for determining expenses and liabilities under GASB 43/45. The ARC is used in lieu of (rather than in addition to) the "pay-as-you-go" cost.

We based all of the above estimates on employees as of August, 2013. Over time, liabilities and cash flow will vary based on the number and demographic characteristics of employees and retirees.

### **C. Description of Retiree Benefits**

Following is a description of the current retiree benefit plan. Non-represented employees receive benefits based on the appropriate classification below. Classified employees hired after June 30, 2010 are not eligible for retiree health benefits. Certificated employees hired after June 30, 2012 are not eligible for District-paid retiree health benefits.

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	<u>Faculty</u>	<u>Classified</u>
Benefit types provided	Medical, dental and vision	Medical, dental and vision
Duration of Benefits	Lifetime	Lifetime*
Required Service	Age 55 to 60: 14 years Age 61 to 64: Age+Service at least 74 Age 65+: 9 years	12 years**
Minimum Age	55***	50**
Dependent Coverage	Yes	Yes

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Several assumptions were made in estimating costs and liabilities under Imperial Valley CCD's retiree health program. Further studies may be desired to validate any assumptions where there is any doubt that the assumption is appropriate. (See Appendices B and C for a list of assumptions and concerns.) For example, Imperial Valley CCD should maintain a retiree database that includes –in addition to date of birth, gender and employee classification –retirement date and (if applicable) dependent date of birth, relationship and gender. It will also be helpful for Imperial Valley CCD to maintain employment termination information –namely, the number of OPEB-eligible employees in each employee class that terminate employment each year for reasons other than death, disability or retirement.

Respectfully submitted,

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While a longer service requirement reduces costs, cost reductions are not usually substantial unless the service period exceeds 20 years of service.

**Retirement rates** determine what proportion of employees retire at each age (assuming employees reach the requisite length of service). Retirement rates often vary by employee classification and implicitly reflect the minimum retirement age required for eligibility. Retirement rates also depend on the amount of pension benefits available. Higher retirement rates increase normal costs but, except for differences in minimum retirement age, retirement rates tend to be consistent between public agencies for each employee type.

**Participation rates** indicate what proportion of retirees are expected to elect retiree health benefits if a significant retiree contribution is required. Higher participation rates increase costs.

The **discount rate** estimates investment earnings for assets earmarked to cover retiree health benefit



## PART III: LIABILITIES AND COSTS FOR RETIREE BENEFITS

### A. Introduction.

We calculated the actuarial present value of projected benefits (APVPB) separately for each employee. We determined eligibility for retiree benefits based on information supplied by Imperial Valley CCD. We then selected assumptions for the factors discussed in the above Section that, based on plan experience and our training and experience, represent our best prediction of future plan experience. For each employee, we applied the appropriate factors based on the employee's age, sex and length of service.

We summarized actuarial assumptions used for this study in Appendix C.

### B. Medicare

The extent of Medicare coverage can affect projections of retiree health costs. The method of coordinating Medicare benefits with the retiree health plan has a substantial impact on retiree health costs. We will be happy to provide more information about Medicare integration methods if requested.

### C. Liability for Retiree Benefits.

For each employee, we projected future premium costs using an assumed trend rate (see Appendix C). To the extent Imperial Valley CCD uses contribution caps, the influence of the trend factor is further reduced.

We multiplied each year's projected cost by the probability that premium will be paid; i.e. based on the probability that the employee is living, has not terminated employment and has retired. The probability that premium will be paid is zero if the employee is not eligible. The employee is not eligible if s/he has not met minimum service, minimum age or, if applicable, maximum age requirements.

The product of each year's premium cost and the probability that premium will be paid equals the expected cost for that year. We discounted the expected cost for each year to the valuation date September 1, 2013 at 4.75% interest.

Finally, we multiplied the above discounted expected cost figures by the probability that the retiree would elect coverage. A retiree may not elect to be covered if retiree health coverage is available less expensively from another source (e.g. Medicare risk contract) or the retiree is covered under a spouse's plan.

For any current retirees, the approach used was similar. The major difference is that the probability of payment for current retirees depends only on mortality and age restrictions (i.e. for retired employees the probability of not being retired and of not being terminated is 100% and the probability of being terminated is 0%).

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### 2. Amortization of Unfunded Actuarial Accrued Liability (UAAL)

If actuarial assumptions are borne out by experience, the District will fully accrue retiree benefits by expensing an amount each year that equals the normal cost. If no accruals had taken place in the past, there would be a shortfall of many years' accruals, accumulated interest and forfeitures for terminated or deceased employees. This shortfall is called the actuarial accrued liability (AAL). We calculated the AAL as the APVTPB minus the present value of future normal costs.

The initial UAAL was amortized using a closed amortization period of 30 years. The District can amortize the remaining or residual UAAL over many years. The table below shows the annual amount necessary to amortize the UAAL over a period of 30 years at 4.75% interest. (Thirty years is the longest amortization period allowable under GASB 43 and 45.) GASB 43 and 45 will allow amortizing the UAAL using either payments that stay the same as a dollar amount, or payments that are a flat percentage of covered payroll over time. The figures below reflect the level dollar method.

#### **Actuarial Accrued Liability as of September 1, 2013**

*Total*

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### Annual Required Contribution (ARC) Year Beginning September 1, 2013

	<i>Total</i>
Normal Cost	\$1,521,712
Initial UAAL Amortization	\$1,705,060
Residual UAAL Amortization	\$336,554
ARC	<u>\$3,563,326</u>

The normal cost remains as long as there are active employees who may some day qualify for District-paid retiree health benefits. This normal cost would increase each year based on covered payroll.

#### 4. Other Components of Annual OPEB Cost (AOC)

Expense and liability amounts may include more components of cost than the normal cost plus amortization of the UAAL. This will apply to employees funded through the Annual Required Contribution (ARC) through an irrevocable trust.

The annual OPEB cost (AOC) will include assumed interest on the net OPEB obligation (NOO). The annual OPEB cost will also include an amortization adjustment for the net OPEB obligation. (It should be noted that there is no NOO if the ARC is fully funded through a qualifying "plan".)

The net OPEB obligation will equal the accumulated differences between the (AOC) and qualifying "plan" contributions.

## PART IV: "PAY AS YOU GO" FUNDING OF RETIREE BENEFITS

We used the actuarial assumptions shown in Appendix C to project ten year cash flow under the retiree health program. Because these cash flow estimates reflect average assumptions applied to a relatively small number of employees, estimates for individual years are certain to be *in*accurate. However, these estimates show the size of cash outflow.

The following table shows a projection of annual amounts needed to pay the District share of retiree health premiums.

<i>Year Beginning September 1</i>	<i>Total</i>	<i>Classified</i>	<i>Certificated</i>	<i>Management</i>
2013	\$1,577,263	\$673,874	\$686,609	\$216,780
2014	\$1,655,404	\$692,970	\$734,601	\$227,833
2015	\$1,748,105	\$720,025	\$787,783	\$240,297
2016	\$1,817,754	\$710,116	\$860,787	\$246,851
2017	\$1,911,064	\$723,725	\$915,784	\$271,555
2018				



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**APPENDIX C: ACTUARIAL ASSUMPTIONS AND METHODS**

Following is a summary of actuarial assumptions and methods used in this study. The District should carefully review these assumptions and methods to make sure they reflect the District's assessment of its underlying experience. It is important for Imperial Valley CCD to understand that the appropriateness of all selected actuarial assumptions and methods are Imperial Valley CCD ' s r e s p o n s i b i l i t y . U n l e s s o t h e r w i s e d i s c l o s e believes that all methods and assumptions are within a reasonable range based on the provisions of GASB 43 and 45, applicable actuarial standards of practice, Imperial Valley CCD ' s a c t u a l h i s t o r i c a l e x p e r i e n c e , a n d T C judgment based on experience and training.

**ACTUARIAL METHODS AND ASSUMPTIONS:**

ACTUARIAL COST METHOD: Entry age normal. The allocation of OPEB cost is based on years of service. We used the level percentage of payroll method to allocate OPEB cost over years of service.

Entry age is based on the age at hire for eligible employees. The attribution period is determined as the difference between the expected retirement age and the age at hire. The present value of future benefits and present value of future normal costs are determined on an employee by employee basis and then aggregated.

To the extent that different benefit formulas apply to different employees of the same class, the normal cost is based on the benefit plan applicable to the most recently hired employees (including future hires if a new benefit formula has been agreed to and communicated to employees).

AMORTIZATION METHODS: We used a level percent, closed 30 year amortization period for the initial UAAL. We used a level

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### ECONOMIC ASSUMPTIONS:

Economic assumptions are set under the guidance of Actuarial Standard of Practice 27 (ASOP 27). Among other things, ASOP 27 provides that economic assumptions should reflect a consistent underlying rate of general inflation. For that reason, we show our assumed long-term inflation rate below.

INFLATION: We assumed 2.75% per year.

INVESTMENT RETURN / DISCOUNT RATE: We assumed 4.75% per year. This is based on assumed long-term return on employer assets.. We used the “Building Block Method” as described in ASOP 27 Paragraph 3.6.2. Our assessment of long-term returns for employer assets is based on long-term historical returns for surplus funds invested pursuant to California Government Code Sections 53601 et seq.

TREND: We assumed 4% per year. Our long-term trend assumption is based on the conclusion that, while medical trend will continue to be cyclical, the average increase over time cannot continue to outstrip general inflation by a wide margin. Trend increases in excess of general inflation result in dramatic increases in unemployment, the number of uninsured and the number of underinsured. These effects are nearing a tipping point which will inevitably result in fundamental changes in health care finance and/or delivery which will bring increases in health care costs more closely in line with general inflation. We do not believe it is reasonable to project historical trend vs. inflation differences several decades into the future.

PAYROLL INCREASE: We assumed 2.75% per year. This assumption applies only to the extent that either or both of the normal cost and/or UAAL amortization use the level percentage of payroll method. For purposes of applying the level percentage of payroll method, payroll increase must not assume any increases in staff or merit increases.

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### *AGING FACTORS*

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<i>Attained Age</i>	<i>Medical Annual Increases</i>
50-64	3.5%
65-69	3.0%
70-74	2.5%
75-79	1.5%
80-84	0.5%
85+	0.0%

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**APPENDIX D: DISTRIBUTION OF ELIGIBLE PARTICIPANTS BY AGE**

**ELIGIBLE ACTIVE EMPLOYEES**

*Age*

### APPENDIX E: CALCULATION OF GASB 43/45 ACCOUNTING ENTRIES

This report is to be used to calculate accounting entries rather than to provide the dollar amount of accounting entries. How the report is to be used to calculate accounting entries depends on several factors. Among them are:

- 1) The amount of prior accounting entries;
- 2) Whether individual components of the ARC are calculated as a level dollar amount or as a level percentage of payroll;
- 3) Whether the employer using a level percentage of payroll method elects to use for this purpose projected payroll, budgeted payroll or actual payroll;
- 4) Whether the employer chooses to adjust the numbers in the report to reflect the difference between the valuation date and the first fiscal year for which the numbers will be used.

To the extent the level percentage of payroll method is used, the employer should adjust the numbers in this report as appropriate to reflect the change in OPEB covered payroll. It should be noted that OPEB covered payroll should only reflect types of pay generating pension credits for plan participants. Please note that plan participants do not necessarily include all active employees eligible for health benefits for several reasons. Following are examples.

- 1) The number of hours worked or other eligibility criteria may differ for OPEB compared to active health benefits;
- 2) There may be active employees over the maximum age OPEB are paid through. For example, if an OPEB plan pays benefits only to Medicare age, any active employees currently over Medicare age are not plan participants;
- 3) Employees hired at an age where they will exceed the maximum age for benefits when the service requirement is met are also not plan participants

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number to report. For example, if the employer uses actual payroll, that number would not be known at the time the valuation is done.

As a result, we believe the proper approach is to report the ARC components as a dollar amount. It is the client's responsibility to turn this number into a percentage of payroll factor by using the dollar amount of the ARC (adjusted, if desired) as a numerator and then calculating the appropriate amount of the denominator based on the payroll determination method elected by the client for the appropriate fiscal year.

If we have been provided with payroll information, we are happy to use that information to help the employer develop an estimate of covered payroll for reporting purposes. However, the validity of the covered payroll remains the employer's responsibility even if TCS assists the employer in c





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<u>OPEB Benefits:</u>	Other PostEmployment Benefits. Generally medical, dental, prescription drug, life, long-term care or other postemployment benefits that are not pension benefits.
<u>Open Amortization Period:</u>	Under an open amortization period, the remaining unamortized balance is subject to a new amortization schedule each valuation. This would be similar, for example, to a homeowner refinancing a mortgage with a new 30-year conventional mortgage every two or three years.
<u>Participation Rate:</u>	The proportion of retirees who elect to receive retiree benefits. A lower participation rate results in lower normal cost and actuarial accrued liability. The participation rate often is related to retiree contributions.
<u>Retirement Rate:</u>	The proportion of active employees who retire each year. Retirement rates are usually based on age and/or length of service. (Retirement rates can be used in conjunction with vesting rates to reflect both age and length of service). The more likely employees are to retire early, the higher normal costs and actuarial accrued liability will be.
<u>Transition Obligation:</u>	The amount of the unfunded actuarial accrued liability at the time actuarial accrual begins in accordance with an applicable accounting standard.
<u>Trend Rate:</u>	The rate at which the cost of retiree benefits is expected to increase over time. The trend rate usually varies by type of benefit (e.g. medical, dental, vision, etc.) and may vary over time. A higher trend rate results in higher normal costs and actuarial accrued liability.
<u>Turnover Rate:</u>	The rate at which employees cease employment due to reasons other than death, disability or retirement. Turnover rates usually vary based on length of service and may vary by other factors. Higher turnover rates reduce normal costs and actuarial accrued liability.
<u>Unfunded Actuarial Accrued Liability:</u>	This is the excess of the actuarial accrued liability over assets irrevocably committed to provide retiree health benefits.
<u>Valuation Date:</u>	The date as of which the OPEB obligation is determined. Under GASB 43 and 45, the valuation date does not have to coincide with the statement date.
<u>Vesting Rate:</u>	The proportion of retiree benefits earned, based on length of service and, sometimes, age. (Vesting rates are often set in conjunction with retirement rates.) More rapid vesting increases normal costs and actuarial accrued liability.