

**San Diego City
Employees' Retirement System**

San Diego Unified Port District

**Actuarial Valuation Report
as of June 30, 2015**

Produced by Cheiron

February 2016

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LETTER OF TRANSMITTAL

February 26, 2016

Board of Administration
 San Diego City Employees' Retirement System
 401 West A Street, Suite 400
 San Diego, CA 92101

Re: San Diego Unified Port District June 30, 2015 Actuarial Valuation

Dear Members of the Board:

At your request, we performed the June 30, 2015 Actuarial Valuation of the San Diego City Employees' Retirement System (SDCERS). The valuation results with respect to the San Diego Unified Port District (UPD) are contained in this valuation report. The table below presents the key results of the valuation for the UPD.

Table I-1			
SDCERS - Unified Port District			
Valuation as of:	June 30, 2015		June 30, 2014
Unfunded Actuarial Liability (in millions)	\$	96.2	\$ 100.0
Funding Ratio		78.8%	76.9%
UPD Contribution Rate		43.04%	42.60%
	Fiscal Year 2017		Fiscal Year 2016
Actuarially Determined Contribution (in millions)			
-if paid at the beginning of the year	\$	14.6	\$ 14.4
-if paid throughout the year	\$	15.1	\$ 14.9

- Unfunded Actuarial Liability (UAL):** The UPD's UAL has decreased by \$3.8 million, compared to an expected decline of \$10.6 million. The largest factors impacting the change in the UAL were the net impact of reducing the discount rate and wage inflation assumptions by 0.125% (increase of \$5.5 million), and the return on the market value of assets being less than expected (increase of \$3.0 million).
- Funding Ratio:** The ratio of the System's actuarial value of assets to its actuarial liabilities improved by 1.9%, from 76.9% to 78.8%. On a market value of assets basis, the funding ratio declined from 83.6% to 81.6%.

- *Contributions (ADC)*: The UPD's actuarially determined contribution (ADC) increased by \$0.2 million. This increase was largely attributable to the reduction in the discount rate and wage inflation assumptions (\$0.4 million) and the return on the market value of assets being less than expected (\$0.3 million). As expected, the phase-in of an additional one-third of the administrative expense assumption added approximately \$250,000 to the ADC.

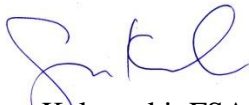
More details on plan experience for previous plan years and projections into the future can be found in the valuation report. This valuation was prepared using census data and financial information as of the valuation date, June 30, 2015. Changes in membership and investment experience following that date are not reflected in this report.

In preparing our report, we relied on information (some oral and some written) supplied by SDCERS' staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice Number 23.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

Finally, this report was prepared exclusively for the San Diego City Employees' Retirement System for the purpose described herein and for the use by the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

Sincerely,
Cheiron



Gene Kalwarski, FSA, EA, MAAA
Principal Consulting Actuary



David Holland, FSA, EA, MAAA
Consulting Actuary

cc: Alice Alsberghe, ASA, MAAA

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

SECTION I - BOARD SUMMARY

The primary purpose of the actuarial valuation is to disclose, as of the valuation date, on the following:

- The financial condition of the SDCERS-Unified Port District Defined Benefit Plan,
- Past and expected trends in the financial condition of SDCERS-Unified Port District,
- The UPD's Actuarially Determined Contribution for Fiscal Year 2017, and
- Information required for the Comprehensive Annual Financial Report (CAFR).

In this Section, we present a summary of the principal valuation results. This summary includes the basis upon which the June 30, 2015 valuation was completed and an examination of the current financial condition of SDCERS-Unified Port District. In addition, we present a review of the key historical trends followed by the projected financial outlook for SDCERS-Unified Port District.

A. Valuation Basis

In November 2015, the SDCERS Board voted to reduce the discount rate and wage inflation assumptions by 0.125% from 7.25% to 7.125% and 3.3% to 3.175%, respectively. These assumption changes have been reflected in this report. The Board also voted to reduce both assumptions by an additional 0.125% in the next valuation.

The June 30, 2015 valuation reflects the second year of the three-year phase-in of expected administrative expenses (\$738,000, increasing by 2.5% per year). The development of this component of the ADC is shown in Table IV-1. All other assumptions and methods are the same as the prior valuation. More details can be found in Appendix B.

Effective with the prior valuation, disclosures required by the Governmental Accounting Standards Board (67 and 68, previously 25 and 27) have been removed from the actuarial valuation report. GASB disclosures are now presented in a stand-alone report, which was issued in November 2015.

Effective January 1, 2013, Unified Port District employees who are deemed to be "New Members" under the California Public Employees' Pension Reform Act (PEPRA) will be subject to a number of plan provisions, including reduced benefit accrual factors, a cap on pensionable salary, three-year averaging for final salary, and mandatory exclusion of certain items from pensionable salary. PEPRA also requires New Members to pay at least 50% of the normal cost, with more than 50% allowed subject to collective bargaining. There are less significant changes for current employees and retirees.

General and Executive Members hired on or after January 1, 2009 participate in a new Miscellaneous Plan with lower benefits and costs. Miscellaneous Plan Members only begin to accrue service and benefits after completing five years of UPD employment, and we have been informed that the UPD does not intend for these members to make contributions. However, Miscellaneous Members, who are also New Members under PEPRA, will still be subject to PEPRA's 50/50 cost sharing provision. More details on the plan provisions for all tiers can be found in Appendix C.

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

B. Current Financial Condition of SDCERS-Unified Port District

The following discussion summarizes the key results of the June 30, 2015 valuation and how they compare to the results from the June 30, 2014 valuation.

1. UPD Membership

Table I-2 shows that total membership in SDCERS-Unified Port District increased slightly from 2014 to 2015. There was movement from active and terminated vested to retiree status, with an 4.5% increase in retirees and decreases of 2.1% and 0.4% for active and terminated vested participants, respectively. The decline in active membership is largely due to the closure of the General and Executive plans to new hires effective January 1, 2009. Over the last two years, Miscellaneous Plan employees have started to appear in the census data as they complete five years of employment and begin to accrue service. Finally, expected active member total payroll increased by 0.7% from 2014 to 2015, and the average pay per active member increased by 2.9%.

Note: The payroll figures shown below are the expected amounts for the fiscal year beginning July 1, 2015. The figures shown in Appendix A are the actual pensionable compensation for the fiscal year ending June 30, 2015.

Table I-2				
SDCERS - Unified Port District - Membership Total				
Valuation as of:	June 30, 2015	June 30, 2014	% Change	
Active Counts	377	385	-2.1%	
Terminated Vested	284	285	-0.4%	
Disabled	62	64	-3.1%	
Retirees	392	375	4.5%	
Beneficiaries	82	79	3.8%	
Total UPD Members	1,197	1,188	0.8%	
Active Member Payroll	\$ 33,512,411	\$ 33,272,693	0.7%	
Average Pay per Active Member	\$ 88,892	\$ 86,423	2.9%	
Benefits in Pay Status	\$ 22,743,044	\$ 21,033,504	8.1%	
Average Benefit	\$ 42,431	\$ 40,605	4.5%	

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

2. UPD Assets and Liabilities

Table I-3 presents a comparison between the June 30, 2015 and June 30, 2014 SDCERS- Unified Port District assets, liabilities, unfunded actuarial liability, and funding ratios.

The key results shown in Table I-3 indicate that due to the total actuarial liability increase of 4.7% but an actuarial value of assets increase of 7.3%, the funding ratio increased from 76.9% as of June 30, 2014 to 78.8% as of June 30, 2015. SDCERS employs a commonly used actuarial smoothing method on the market value that dampens market volatility, so the actuarial value of assets increased more than the market value (2.2%). Had the funding ratio been measured on a market value of assets basis, the ratio would be 81.6% as of June 30, 2015.

Section II-C provides additional information explaining the development of the actuarial value of assets.

Table I-3				
SDCERS - Unified Port District - Assets & Liabilities				
Entry Age Normal (EAN) Liabilities	June 30, 2015	June 30, 2014	% Change	
Actives	\$ 150,323,266	\$ 155,838,187	-3.5%	
Terminated Vested	18,275,399	16,404,679	11.4%	
Disabled	20,503,209	19,332,018	6.1%	
Retirees	251,008,677	228,491,095	9.9%	
Beneficiaries	13,662,977	13,205,708	3.5%	
Total Actuarial (EAN) Liability	\$ 453,773,528	\$ 433,271,687	4.7%	
Actuarial Value Assets	\$ 357,599,720	\$ 333,228,645	7.3%	
Unfunded Actuarial Liability-Actuarial Value	\$ 96,173,807	\$ 100,043,042	-3.9%	
Funding Ratio-Actuarial Value	78.8%	76.9%	1.9%	
Market Value Assets	\$ 370,053,588	\$ 362,246,000	2.2%	
Unfunded Actuarial Liability-Market Value	\$ 83,719,939	\$ 71,025,687	17.9%	
Funding Ratio-Market Value	81.6%	83.6%	-2.0%	

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

3. Components of UAL Change between June 30, 2014 and June 30, 2015

SDCERS-Unified Port District unfunded actuarial liability (UAL) decreased by \$3.8 million, from \$100.0 million to \$96.2 million. Table I-4 below presents the specific components of the change in the UAL.

The Plan's UAL was expected to decline by \$10.6 million. The smaller than expected decrease in the UAL was mostly driven by the net impact of reducing the discount rate and wage inflation assumptions (\$5.5 million) and the return on the market value of assets being less than expected (\$3.0 million). There was a gain of \$1.9 million on the actuarial liabilities, with the largest source being lower than expected COLAs for retired members.

Table I-4	
SDCERS - Unified Port District-Change in UAL	
(In Millions)	
1. UAL at June 30, 2014	\$ 100.0
2. Expected change in UAL ¹	(10.6)
3. Investment experience loss	
a. Anticipated loss/(gain)	(7.1)
b. Actual loss/(gain)	(4.1)
c. Difference (b - a)	3.0
4. Liability experience gain	(1.9)
5. Reduction in discount rate and wage inflation assumptions	5.5
6. Administrative expense	N/A
7. Employee contributions paid less than expected	0.2
8. Other misc (includes purchased service)	(0.1)
9. Total change in UAL: sum of 2 through 8	(3.9)
10. UAL at June 30, 2015: 1 + 9	\$ 96.2

¹ Includes projected phase-in of investment gains or losses.

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

4. UPD Contributions (ADC)

The Unified Port District's actuarially determined contribution (ADC) for FY 2017 increased by \$0.2 million; from \$14.4 million to \$14.6 million. The ADC was expected to decline by \$0.2 million, to \$14.2 million, assuming continued phase-in of investment experience from prior years.

The two largest factors causing the ADC to be greater than expected were the investment losses on the market value of assets, which increased the ADC by \$0.3 million, and the net impact of reducing the discount rate and wage inflation assumptions, which increased the ADC by \$0.4 million. FY 2017 is the second year of the three-year phase-in of assumed administrative expenses, which are \$738,000 and assumed to grow at 2.5% per year. The recognition of an additional one-third of the administrative expense assumption increased the ADC by approximately \$250,000. For FY 2018 and for all fiscal years following, 100% of the expected administrative expenses will be added to the ADC.

In Table I-5 below we present the specific components of the change in the ADC. In Section IV we provide more detail on the development of this contribution.

Table I-5	
SDCERS - Unified Port District-Change in ADC	
(In Millions)	
1. ADC at June 30, 2014	\$ 14.4
2. Expected change in ADC ¹	(0.2)
3. Investment experience loss	
a. Anticipated increase/(decrease)	(0.7)
b. Actual increase/(decrease)	(0.4)
c. Difference (b - a)	0.3
4. Liability experience gain	(0.4)
5. Reduction in discount rate and wage inflation assumptions	0.4
6. Employee contributions paid less than expected	0.0
7. Other misc (includes purchased service)	0.1
8. Total change in ADC: sum of 2 through 7	0.2
9. ADC at June 30, 2015: 1 + 8	\$ 14.6

¹ Includes projected phase-in of asset gains or losses and phase-in of an additional one-third of the administrative expense assumption.

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

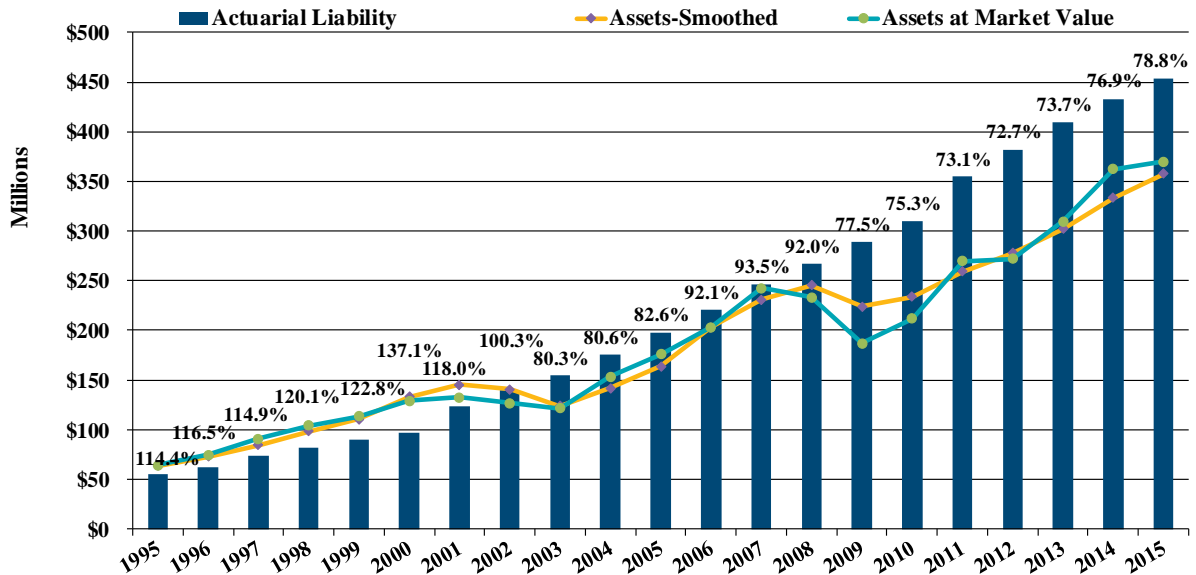
SECTION I - BOARD SUMMARY

C. Historical Trends SDCERS-Unified Port District

Despite the primary focus given each year on the most recently computed unfunded actuarial liability (UAL), funding ratio, and the UPD’s contribution (ADC), it is important to remember that each valuation is merely a snapshot of the long-term progress of a pension plan. It is more important to judge a current year’s valuation results relative to historical trends, and trends expected into the future.

In the chart below, we present the historical trends for the market value and smoothed assets compared to actuarial liabilities and SDCERS-Unified Port District funding ratios since 1995.

SDCERS- Unified Port District Assets and Liabilities 1995-2015



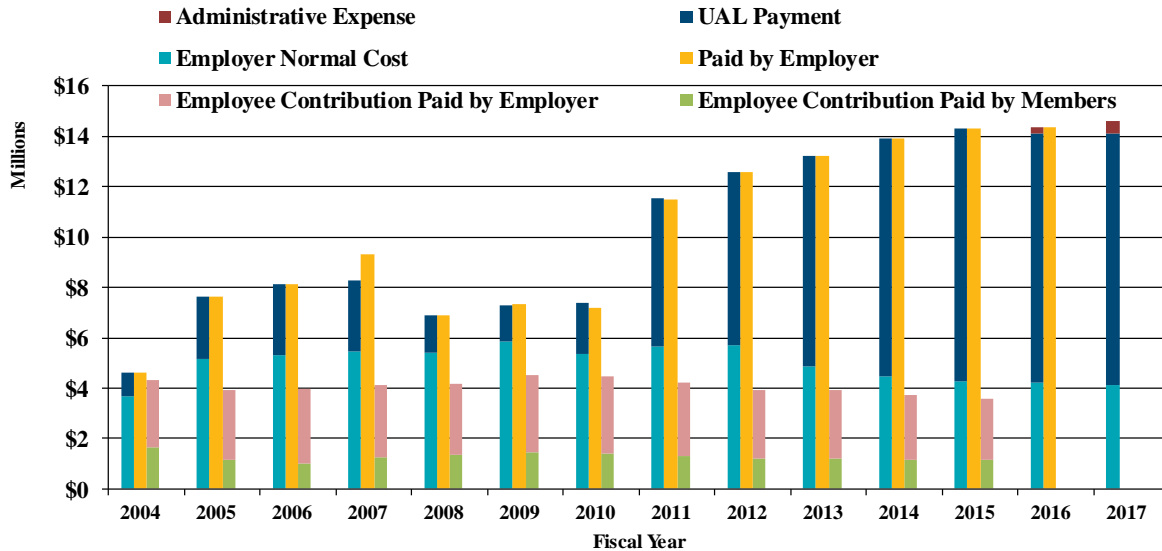
From a low of 80.3% in 2003, the funding ratio improved significantly over the next several years primarily due to strong investment performance. In 2009, the funding ratio declined significantly due to investment losses and continued to decrease slightly each year after 2009 as the investment loss was gradually recognized in the actuarial value of assets. Over the last three years the funding ratio has increased, primarily due to better than expected investment performance. As mentioned earlier, the funding ratios represent the ratio of the smoothed (actuarial) assets over the actuarial liabilities. If the market value of assets were used instead, the funding ratio as of June 30, 2015 reached 81.6%.

**SDCERS-UNIFIED PORT DISTRICT
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SECTION I - BOARD SUMMARY

In the next chart below, we present the historical trends for the SDCERS-Unified Port District contributions: actual contributions made by the UPD and by the Members, and the actuarially computed contributions (previously the GASB ARC, but now referred to as the ADC).

SDCERS-Unified Port District and Member Contribution Rates FY 2004-2017



This chart compares the actual contributions made by the Unified Port District (gold bars) to the annual required contribution (ARC). The ADC is broken out by component - Employer Normal Cost plus UAL payment, plus administrative expense. The contributions paid by the UPD are based on the Board’s adopted funding practice of Normal Cost plus amortization of the various UAL components, including the requirement beginning in FY 2009 that there is no negative amortization and the requirement beginning in FY 2016 to fund the administrative expenses. The FY 2017 ADC reflects the second year of the three-year phase-in of the administrative expense assumption. The chart indicates that the Unified Port District has been consistently paying at or above the ADC for the entire period shown.

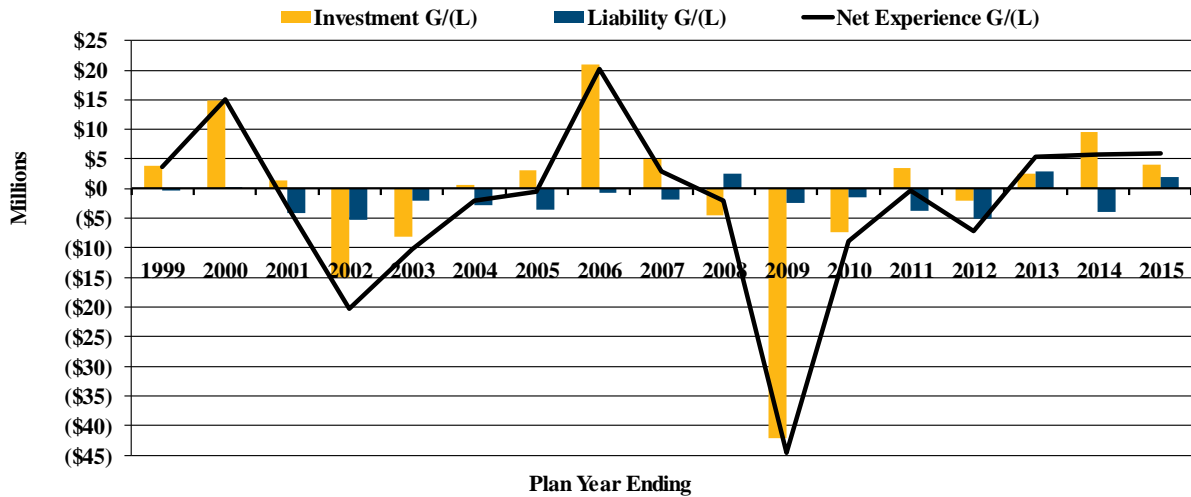
Employee contributions paid by the UPD and paid by the Members are also shown in the chart. A substantial portion of employee contributions are “offset” (paid for) by the UPD.

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ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

The last historical chart for SDCERS-Unified Port District presents the pattern of annual experience gains and losses, broken into the investment and liability components. The chart does not include any changes in SDCERS' assets and liabilities attributable to changes in actuarial methods, procedures, or assumptions, or to changes in plan benefits.

SDCERS-Unified Port District Historical Gain/(Loss) 1999-2015



The key insights from this chart are

- The System experienced significant investment losses (gold bars) in 2002 and 2003, which were offset by investment gains from 2004 to 2007. However, the investment losses of 2008 through 2010 more than offset those gains.
- The investment loss in 2009 was by far the most significant gain or loss during the period shown.
- During the period shown there has generally been a pattern of liability losses, which have been small relative to total liabilities. The sources of these gains and losses will be explored in our next formal experience study, scheduled for 2016.

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ACTUARIAL VALUATION AS OF JUNE 30, 2015**

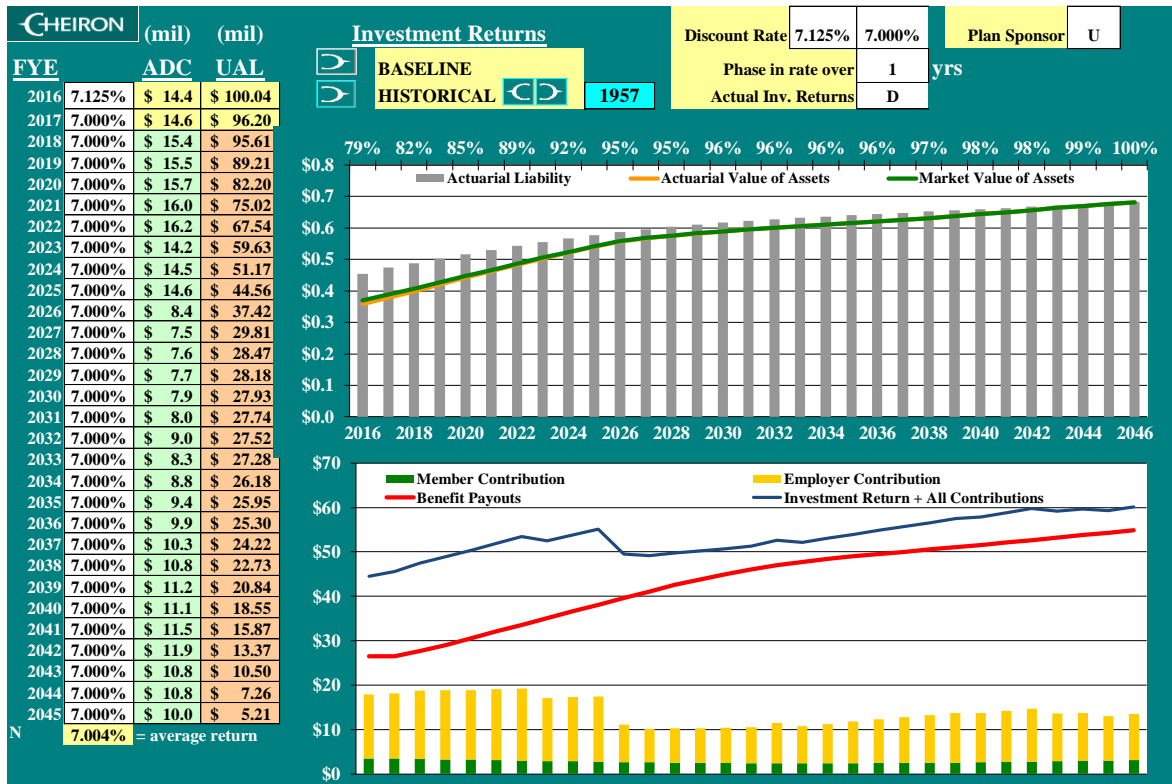
SECTION I - BOARD SUMMARY

D. Projected Financial Trends

Our analysis of SDCERS-Unified Port District projected financial trends is a very important part of this valuation. These projections based on the June 30, 2015 valuation results are presented in terms of benefit security (assets over liabilities) and the UPD's expected cost progression.

In the chart that follows, we project the SDCERS-Unified Port District assets and liabilities and the UPD's contributions. These projections assume a 7.125% investment return and discount rate for the coming year and 7.00% thereafter, as well as all experience conforming to the Plan's assumptions. The upper chart compares the assets (green and yellow lines) and liabilities (gray bars) and the lower chart shows contributions in dollars (employer contributions in yellow bars and member contributions in green bars). The left side of the exhibit shows the returns assumed each year followed by the annual ADC and UAL in dollar amounts.

SDCERS-Unified Port District Projections FY 2016-2046 (earnings as assumed)



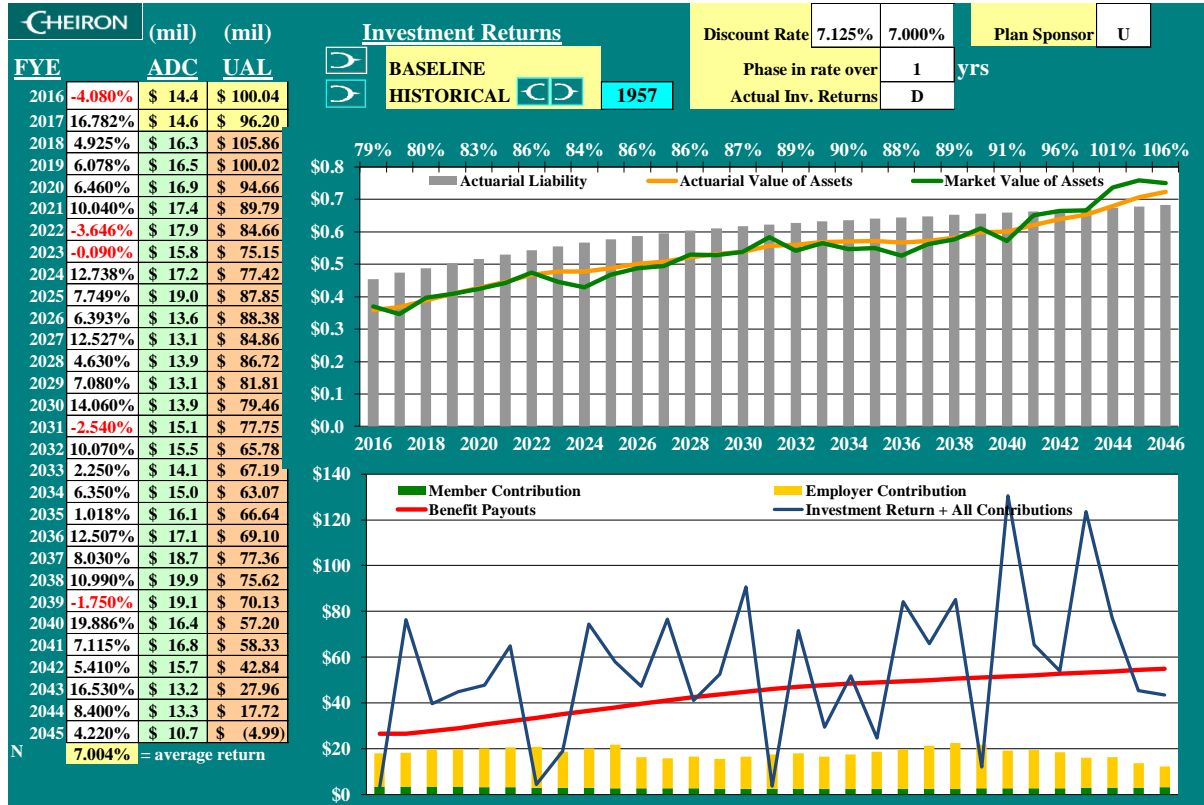
Based on assuming 7.125% (FY 2016) and 7.00% (FY 2017 and thereafter) earnings, the UPD's funded status (percentages at the top of the upper graph) is ultimately projected to reach 100% by the end of the period. The UPD's ADC is projected to remain reasonably steady over the next ten years or so, decline significantly in 2026, and then increase slightly by the end of the period.

**SDCERS-UNIFIED PORT DISTRICT
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SECTION I - BOARD SUMMARY

However, it is very important to note that these projections, while valid as baseline projections, **are not going to occur** as experience never conforms exactly to assumptions from year to year. As a result, we present the following additional stress testing projection based on assuming varying returns in the future, which are approximately 7.00% on average (reflecting the assumption of 7.125% for FY 2017 and 7.00% thereafter).

SDCERS-Unified Port District Projections FY 2016-2046 (earnings which vary by year)



With varying annual earnings that average over the period to approximately 7.00%, one can see the volatility in the funding ratios in the top chart and employer contributions in the bottom chart. Note that this chart reflects an illustrative scenario and is not intended to reflect future expectations.

This last chart demonstrates the risks faced by SDCERS measured in terms of funding ratios and contribution rates. Whether the System is fully funded or poorly funded, subsequent returns can quickly alter the financial position of the Plan dramatically. It is impossible to judge the financial soundness of a System with a single year point measurement. What is more important to consider is the System’s level of conservatism in funding the Plan, and the discipline and ability of the plan sponsor to consistently contribute the ADC as determined by the plan actuary.

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION II - ASSETS

Like other public pension plans, SDCERS uses two different asset measurements that are presented in this section of the report: the market value and the actuarial value of assets. The market value of assets represents, as of the valuation date, the value of the assets if they were liquidated on that date. The actuarial value of assets is a value that smooths annual investment performance over multiple years to reduce the impact of annual investment volatility on employer contributions. The actuarial value of assets is used in determining SDCERS' contributions for the three participating employer plans.

Each employer receives a separate actuarial valuation report and cost determination. However, the assets of all employer plans are pooled for investment purposes. The apportionment of the assets among the employer plans directly impacts each employer's costs. Therefore, in the interest of ensuring transparency, this section discloses information on the total assets of SDCERS-All Employers. In addition, a brief explanation of how those assets are apportioned to the City of San Diego, the San Diego Unified Port District, and the San Diego County Regional Airport Authority is included.

On the following pages, detailed information is presented on SDCERS-All Employers assets, including:

- A. Disclosure of the June 30, 2015 total SDCERS market value of assets, by asset class;
- B. Market value of assets by Plan Sponsor;
- C. Development of the actuarial value of assets; and
- D. Disclosure of the investment performance for the year.

**SDCERS-UNIFIED PORT DISTRICT
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SECTION II - ASSETS

A. Disclosure of Market Value of Assets

The market value of assets represents a “snap-shot” value as of June 30, 2015, the last day of the fiscal year, which provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with swings in the investment markets. Because these fluctuations would cause volatility in employer contributions, an actuarial value of assets is developed. Table II-1 below discloses the market value by asset class of SDCERS – All Employers’ gross assets on June 30, 2015.

Table II-1	
SDCERS – All Employers	
Summary of Reported Market Value of Total Defined Benefit Plan Assets	
Cash	\$ 269,892,705
US Stocks	1,671,938,013
International Stocks	1,535,907,192
Private Equity	748,336,408
Bonds	2,084,307,097
Real Estate	753,721,388
Receivables	154,852,003
Miscellaneous	226,276,016
Accounts Payable	<u>(548,804,287)</u>
Market Value of Assets – June 30, 2015	\$ 6,896,426,535

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION II - ASSETS

B. Market Value of Assets by Plan Sponsor

As of July 1, 2007, the City, Unified Port District and Airport Authority Plans were separated into independent, qualified, single employer, governmental defined benefit plans and trusts. The assets of the three separate plans and trusts are pooled in the SDCERS Group Trust, which was established as of July 1, 2007. SDCERS invests and administers the Group Trust as a common investment fund and accounts separately for the proportional interest of each plan and trust that participates in the Group Trust. Cash flow activity for each plan is recorded directly to that plan, with investment activity and other cash flow activity not specific to any one plan being allocated based upon each plan's respective share of the Group Trust's total assets, with time-weighted adjustments for the plan-specific cash flows. Administrative expenses are allocated based on the proportion of participants of a participating trust to the number of total participants of all participating trusts on the first day of the plan year. Table II-2 below discloses the market value and actuarial value of assets by Plan.

Table II-2			
Summary of Market and Actuarial Assets for Each Employer Group as of June 30, 2015			
	<u>Market Value</u> Total Net Assets June 30, 2014	<u>Market Value</u> Total Net Assets June 30, 2015	<u>Actuarial Value</u> Total Assets June 30, 2015
City of San Diego	\$ 6,292,855,000	\$ 6,387,828,761	\$ 6,204,243,990
Unified Port District	362,246,000	370,053,588	357,599,720
Airport Authority	<u>130,228,000</u>	<u>138,544,185</u>	<u>135,858,959</u>
Total-SDCERS	\$ 6,785,329,000	\$ 6,896,426,535	\$ 6,697,702,669

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION II - ASSETS

C. Actuarial Value of Assets

To determine on-going funding requirements, most pension plans utilize an actuarial value of assets. Unlike the market value of assets, the actuarial value of assets represents an asset value based on averaging or smoothing year-to-year market value returns for purposes of reducing the resulting volatility on contributions.

The actuarial value of assets is equal to 100% of the expected actuarial value of assets as of June 30, 2015 plus 25% of the difference between the current actual market value of assets and the expected actuarial value of assets. (See Appendix B, Section B-2 for further explanation of the asset valuation method). In no event will the actuarial value of assets ever be less than 80% of the market value of assets, nor ever greater than 120% of the market value of assets.

Table II-3 SDCERS - Unified Port District Development of Actuarial Value of Assets at June 30, 2015 Expected Value of Assets Method	
1. Actuarial Value of Assets at June 30, 2014	\$ 333,228,645
2. Amount in (1) with interest at 7.25% to June 30, 2015	357,387,722
3. Employer and Member contributions for the Plan Year ended June 30, 2015	18,195,840
4. Disbursements from Trust excluding investment expenses, June 30, 2014 through June 30, 2015	22,451,677
5. Interest on cash flows to June 30, 2015 at 7.25% per year	<u>316,545</u>
6. Expected Actuarial Value of Assets at June 30, 2015 = (2) + (3) – (4) + (5)	353,448,431
7. Actual Market Value of Assets at June 30, 2015	<u>370,053,588</u>
8. Excess of (7) over (6)	16,605,157
9. Preliminary Actuarial Value of Assets at June 30, 2015 = (6) + 25% of (8)	\$ 357,599,720
10. 80% Minimum Corridor on the Actuarial Value of Assets = 80% of (7)	296,042,871
11. 120% Maximum Corridor on the Actuarial Value of Assets = 120% of (7)	444,064,306
12. Final Actuarial Value of Assets at June 30, 2015 = (9), but no less than (10) and no more than (11)	\$ 357,599,720

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION II - ASSETS

D. Investment Performance

The return on the market value of assets, as reported by SDCERS' investment consultant Aon Hewitt Investment Consulting, was 3.3%. The return in FY 2014 was 16.8%.

On an actuarial (smoothed) value of assets basis, the return for FY 2015 was 8.46%. This return produced for SDCERS-All Employers an overall investment gain of \$65.5 million for the year ending June 30, 2015. (Note: this reported gain is different than the investment gain of \$4.1 million reported in Table I-4 of this report. \$4.1 million is the gain only for SDCERS-Unified Port District).

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION III - LIABILITIES

In this section, we present detailed information on liabilities for SDCERS-Unified Port District including:

- Disclosure of liabilities at June 30, 2014 and June 30, 2015, and
- Statement of changes in the unfunded actuarial liabilities during the year.

A. Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the purpose for which the figures are ultimately used. Note that these liabilities are not applicable for settlement purposes, including the purchase of annuities and the payment of lump sums.

- **Present Value of Future Benefits:** Used for measuring all future SDCERS obligations, represents the amount of money needed today to fully fund all benefits of SDCERS both earned as of the valuation date and those to be earned in the future by current plan members, under the current plan provisions.
- **Actuarial Liability-Entry Age Normal (EAN):** Used for determining employer contributions and GASB accounting disclosures. This liability is calculated taking the present value of all future benefits and subtracting the present value of future Member contributions and future employer normal costs as determined under the EAN actuarial funding method. It represents the portion of the present value of future benefits attributed to service prior to the valuation date by the Entry Age Normal method.
- **Present Value of Accrued Benefits:** This liability represents the present value of future benefits payable to all plan participants if the plan were terminated as of the valuation date, and future accruals and contributions stopped.

Table III-1, on the following page, discloses the first two of these liabilities for the current and prior year valuations. Table III-2 breaks down these liabilities by tier; subtracting the actuarial value of assets from the actuarial liability results in a net surplus or an unfunded actuarial liability (UAL). Table III-3 disclosed the third of these liabilities, present value of accrued benefits, for the current and prior year valuations.

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION III - LIABILITIES

Table III-1			
SDCERS - Unified Port District - Total			
Valuation as of:	June 30, 2015		June 30, 2014
Present Value of Future Benefits			
Actives	\$	201,058,621	\$ 208,016,016
Terminated Vested		18,275,399	16,404,679
Disabled		20,503,209	19,332,018
Retirees		251,008,677	228,491,095
Beneficiaries		13,662,977	13,205,708
Total Unified Port District	\$	504,508,883	\$ 485,449,516
Actuarial Liability - EAN			
Total Present Value of Future Benefits	\$	504,508,883	\$ 485,449,516
Present Value of Future Normal Costs			
Employer Portion		26,946,900	27,863,633
Employee Portion		23,788,455	24,314,196
Actuarial Liability - EAN	\$	453,773,528	\$ 433,271,687
Actuarial Value of Assets	\$	357,599,720	\$ 333,228,645
Unfunded EAN Actuarial Liability	\$	96,173,807	\$ 100,043,042

Table III-2 shows the actuarial liability as of June 30, 2015 for General, Miscellaneous, Executive and Safety Members of SDCERS-Unified Port District.

Table III-2							
SDCERS - Unified Port District as of June 30, 2015							
	Total	General	Miscellaneous	Executives	Safety-Old	Safety-PEPRA	
Present Value of Future Benefits							
Actives	\$ 201,058,621	\$ 120,712,272	\$ 696,752	\$ 5,008,190	\$ 72,485,122	\$ 2,156,285	
Terminated Vested	18,275,399	14,767,757	-	282,073	3,222,386	3,183	
Disabled	20,503,209	8,632,964	-	-	11,870,245	-	
Retirees	251,008,677	138,219,768	-	19,707,539	93,081,370	-	
Beneficiaries	13,662,977	11,351,279	-	-	2,311,698	-	
Total Unified Port District	\$ 504,508,883	\$ 293,684,040	\$ 696,752	\$ 24,997,802	\$ 182,970,821	\$ 2,159,468	
Actuarial Liability - EAN							
Actives	\$ 150,323,266	\$ 95,231,658	\$ 41,192	\$ 4,311,008	\$ 50,734,739	\$ 4,669	
Terminated Vested	18,275,399	14,767,757	-	282,073	3,222,386	3,183	
Disabled	20,503,209	8,632,964	-	-	11,870,245	-	
Retirees	251,008,677	138,219,768	-	19,707,539	93,081,370	-	
Beneficiaries	13,662,977	11,351,279	-	-	2,311,698	-	
Total Unified Port District	\$ 453,773,528	\$ 268,203,426	\$ 41,192	\$ 24,300,621	\$ 161,220,438	\$ 7,852	

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION III - LIABILITIES

Table III-3 shows the present value of accrued benefits as of June 30, 2015 for all Members of SDCERS-Unified Port District.

Table III-3				
SDCERS - Unified Port District - Present Value of Accrued Benefits				
	Valuation as of:	June 30, 2015	June 30, 2014	% Change
Present Value of Accrued Benefits				
1. Present Value of Benefits Accrued and Vested to Date				
a. Members Currently Receiving Payments	\$	285,174,863	\$ 261,028,821	9.3%
b. Vested Terminated and Inactive Members		18,275,399	16,404,679	11.4%
c. Active Members		<u>105,967,558</u>	<u>108,949,672</u>	<u>-2.7%</u>
d. Total PVAB	\$	409,417,820	\$ 386,383,172	6.0%
2. Assets at Market Value	\$	370,053,588	\$ 362,246,000	2.2%
3. Unfunded Present Value of Accrued Benefits, But Not Less Than Zero	\$	39,364,232	\$ 24,137,172	
4. Ratio of Assets to Value of Benefits (2)/(1)(d)		90.39%	93.75%	-3.4%

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION III - LIABILITIES

B. Changes in Unfunded Actuarial Liabilities

The UAL of any retirement plan is expected to change at each subsequent valuation for a variety of reasons. In each valuation, we report on those elements of change in the UAL that have particular significance or could potentially affect the long-term financial outlook of a retirement plan. Below we present key changes in liabilities since the last valuation.

Table III-4		
Development of 2015 Experience Gain/(Loss) SDCERS - Unified Port District		
(In Thousands)		
1. Unfunded Actuarial Liability at June 30, 2014		\$ 100,043.0
2. Beginning of year Unfunded Actuarial Liability payment		(10,048.2)
3. Interest accrued ((1+2) x 7.25%)		<u>6,524.6</u>
4. Expected Unfunded Actuarial Liability at June 30, 2015 (1+2+3)		96,519.5
5. Actual Unfunded Liability at June 30, 2015		96,173.8
6. Difference: (4 - 5)		345.7
7. Portion of difference (6) due to actuarial assumption or method changes		(5,479.9)
8. Portion of difference (6) due to plan changes		-
9. Portion of difference (6) due to contributions less than expected		(174.9)
10. Portion of difference (6) due to net experience Gain/(Loss)		6,000.5
a) portion of (10) due to investment experience	\$	4,094.2
b) portion of (10) due to liability experience	\$	1,906.3
c) portion of (10) due to service purchases	\$	-

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION III - LIABILITIES

Table III-5 shows the history of past experience gains and losses.

Table III-5					
Experience Gain/(Loss) - Historical SDCERS - Unified Port District ¹					
Valuation		Gain/(Loss)	Beginning-of-Year	Gain/(Loss)	
Date		<u>Gain/(Loss)</u>	<u>Actuarial Liabilities</u>	<u>% of Liability</u>	
6/30/1999	\$	3,601,033	\$	81,632,570	4.4%
6/30/2000		15,094,373		89,808,543	16.8
6/30/2001		(2,899,896)		97,159,852	(3.0)
6/30/2002		(20,288,699)		123,125,659	(16.5)
12/31/2002	¹	(11,097,105)		140,196,959	(7.9)
6/30/2003		(10,248,435)		137,824,047	(7.4)
6/30/2004		(2,070,099)		154,299,669	(1.3)
6/30/2005		(552,547)		175,366,198	(0.3)
6/30/2006		20,138,814		198,071,900	10.2
6/30/2007		2,994,479		220,637,279	1.4
6/30/2008		(1,999,505)		246,538,326	(0.8)
6/30/2009		(44,607,050)		267,036,729	(16.7)
6/30/2010		(8,831,078)		288,698,145	(3.1)
6/30/2011		(388,359)		310,467,297	(0.1)
6/30/2012		(7,152,892)		354,837,169	(2.0)
6/30/2013		5,648,661		382,013,160	1.5
6/30/2014		5,568,248		410,026,471	1.4
6/30/2015		6,000,467		433,271,687	1.4

¹ Airport Authority split as of December 31, 2002.

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION IV - CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to achieve and maintain an appropriate funded status of a plan. Typically, the actuarial process will use an actuarial funding method that attempts to create a pattern of contributions that is both stable and predictable.

The actuarial funding methodology employed is the Entry Age Normal (EAN) actuarial funding method. Under the funding method, there are three components to the total contribution: the normal cost, an amortization payment on the unfunded actuarial liability, and the expected administrative expenses. The normal cost for an individual employee is the ratio of their present value of future benefits to present value of future salaries at entry age, multiplied by their valuation salary. The gross normal cost rate for each sub-group is determined by dividing the sum of the individual normal costs by the total valuation salary for that sub-group. The gross normal cost rate is then reduced by the average employee contribution rate to determine the employer normal cost rate. Finally, the employer normal cost rate for each sub-group is multiplied by that group's projected FY 2017 payroll to determine the normal cost component of the FY 2017 ADC.

The EAN actuarial liability is the Plan's total present value of future benefits minus the total present value of future normal costs. The difference between the EAN actuarial liability and the actuarial value of assets is the unfunded actuarial liability. The UAL for FY 2017 is to be amortized over several different periods. Table IV-2 shows the outstanding balance, the FY 2017 payment and the remaining amortization period for each of these components. If necessary, there is an additional UAL cost component to ensure that there is no negative amortization in any year.

In January 2015 the Board voted to account for expected administrative expenses explicitly in the actuarially determined contribution (ADC). The administrative expense component is \$492,000 for FY 2017, reflecting the second year of a three-year phase-in of the administrative expense assumption (\$738,000 annually, increasing by 2.5% per year). For FY 2018 and all fiscal years following, 100% of the expected administrative expenses will be added to the ADC.

Table IV-1 on the following page shows how the Unified Port District's contribution rate for SDCERS for FY 2017 is developed.

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION IV - CONTRIBUTIONS

**Table IV-1
SDCERS - Unified Port District
Development of the UPD's Contribution as of June 30, 2015 for FY 2017
(dollars in millions)**

	WEIGHTED TOTAL UPD	Non-Safety			Safety			
		Weighted Total	General	Misc	Executives	Weighted Total	Safety Old Plan	Safety PEPRA
1. Total Normal Cost Rate as of June 30, 2015	23.17%	20.18%	20.80%	7.77%	21.78%	29.08%	29.54%	23.40%
2. Member Contribution Rate as of June 30, 2015	10.75%	9.55%	10.05%	0.00%	10.11%	13.09%	13.26%	11.19%
3. Employer Normal Cost Rate as of June 30, 2015 (1-2)	12.42%	10.63%	10.75%	7.77%	11.67%	15.99%	16.28%	12.21%
4. Actuarial Liability	\$ 453.8	\$ 292.5	\$ 268.2	\$ 0.0	\$ 24.3	\$ 161.2	\$ 161.2	\$ 0.0
5. Actuarial Assets	\$ 357.6	\$ 230.5	\$ 211.4	\$ 0.0	\$ 19.2	\$ 127.1	\$ 127.1	\$ 0.0
6. Total Unfunded Actuarial Liability (UAL) (4-5) ¹	\$ 96.2	\$ 62.0	\$ 56.8	\$ 0.0	\$ 5.2	\$ 34.2	\$ 34.2	\$ 0.0
7. Preliminary FY17 UAL amortization ¹	\$ 10.0	\$ 6.4	\$ 5.9	\$ 0.0	\$ 0.5	\$ 3.6	\$ 3.6	\$ 0.0
8. <u>Negative Amortization Test for FY17</u>								
a. Total UAL on 6/30/15 less FY16 UAL payment	\$ 86.3	\$ 55.6	\$ 51.0	\$ 0.0	\$ 4.6	\$ 30.7	\$ 30.7	\$ 0.0
b. Interest on 8a. To 6/30/16	\$ 6.1	\$ 4.0	\$ 3.6	\$ 0.0	\$ 0.3	\$ 2.2	\$ 2.2	\$ 0.0
c. Preliminary FY17 UAL amortization (line 7)	\$ 10.0	\$ 6.4	\$ 5.9	\$ 0.0	\$ 0.5	\$ 3.6	\$ 3.6	\$ 0.0
d. Negative interest (8b - 8c, not less than zero)	-	-	-	-	-	-	-	-
9. Total FY17 UAL payment on 7/01/16 (8c + 8d)	\$ 10.0	\$ 6.4	\$ 5.9	\$ 0.0	\$ 0.5	\$ 3.6	\$ 3.6	\$ 0.0
10. Total FY17 UAL payment throughout year	\$ 10.3	\$ 6.7	\$ 6.1	\$ 0.0	\$ 0.6	\$ 3.7	\$ 3.7	\$ 0.0
11. Total Expected Payroll for FY17	\$ 35.1	\$ 23.5	\$ 19.3	\$ 3.6	\$ 0.6	\$ 11.7	\$ 10.3	\$ 1.4
12. FY17 Normal Cost paid throughout the year	\$ 4.3	\$ 2.4	\$ 2.1	\$ 0.3	\$ 0.1	\$ 1.8	\$ 1.7	\$ 0.2
13. FY17 Normal Cost paid at start of year	\$ 4.1	\$ 2.3	\$ 2.0	\$ 0.3	\$ 0.1	\$ 1.8	\$ 1.6	\$ 0.2
14. Administrative Expenses paid throughout the year ²	\$ 0.5	\$ 0.3	\$ 0.3	\$ 0.0	\$ 0.0	\$ 0.2	\$ 0.2	\$ 0.0
15. Determination of FY17 ADC %								
a. Employer Normal Cost Rate (12 divided by 11)	12.14%	10.32%	10.75%	7.77%	11.67%	15.81%	16.28%	12.21%
b. UAL Rate (line 10 divided by line 11)	29.45%	28.41%	31.67%	0.03%	92.86%	31.53%	35.66%	0.01%
c. Admin Expense Rate (line 14 divided by line 11)	1.45%	1.35%	1.48%	0.27%	3.64%	1.65%	1.81%	0.43%
d. Total employer ADC % (15a + 15b + 15c)	43.04%	40.08%	43.89%	8.07%	108.18%	48.99%	53.75%	12.65%
16. Determination of FY17 ADC dollars								
a. FY17 ADC if paid throughout year	\$ 15.1	\$ 9.4	\$ 8.5	\$ 0.3	\$ 0.6	\$ 5.7	\$ 5.5	\$ 0.2
b. FY17 ADC if paid at beginning of year	\$ 14.6	\$ 9.1	\$ 8.2	\$ 0.3	\$ 0.6	\$ 5.5	\$ 5.4	\$ 0.2

¹ See Table IV-2 for components of these amounts.

² Administrative Expenses are to be phased on over three years.

Note: Numbers may not add due to rounding.

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION IV - CONTRIBUTIONS

Table IV-2 shows information on each layer of the June 30, 2015 UAL.

**Table IV-2
SDCERS - Unified Port District
Schedule of Amortization Bases as of July 1, 2015
Used in Development of the UPD's Contribution for FY 2017**

<u>Type of Base</u>	<u>Date Established</u>	<u>Initial Amount</u>	<u>Initial Amortization Years</u>	<u>July 1, 2015 Outstanding Balance</u>	<u>Outstanding Balance for FY 2017 (BOY) ¹</u>	<u>Remaining Amortization Years</u>	<u>FY 2017 Amortization Amount</u>
1. June 30, 2007 UAL	7/1/2007	\$ 15,953,422	14	\$ 11,927,565	\$ 10,740,301	6	\$ 1,962,287
2. Assumption Change	7/1/2008	3,749,736	30	4,404,740	4,425,851	23	282,063
3. Experience Loss	7/1/2008	865,441	15	769,645	718,535	8	102,060
4. Experience Loss	7/1/2009	43,763,842	15	40,890,809	38,648,037	9	4,967,170
5. Experience Loss	7/1/2010	8,786,725	15	8,540,328	8,152,494	10	959,817
6. Experience Gain	7/1/2011	(488,764)	15	(490,146)	(471,731)	11	(51,383)
7. Plan Change (ERIP)	7/1/2011	9,482,154	20	10,087,007	9,961,855	16	813,016
8. Assumption Change	7/1/2011	10,225,742	30	11,481,592	11,588,449	26	685,332
9. Experience Loss	7/1/2012	6,509,649	15	6,705,178	6,497,643	12	660,189
10. Method Change	7/1/2012	2,411,525	30	2,666,401	2,694,613	27	155,886
11. Experience Gain	7/1/2013	(3,358,988)	15	(3,533,100)	(3,443,726)	13	(328,625)
12. Assumption Change	7/1/2013	8,088,814	30	8,796,991	8,900,431	28	504,320
13. Experience Gain	7/1/2014	(5,340,373)	15	(5,727,550)	(5,610,644)	14	(505,792)
14. Experience Gain	7/1/2015	(5,825,601)	15	(5,825,601)	(6,240,675)	15	(534,132)
15. Assumption Change	7/1/2015	5,479,948	30	<u>5,479,948</u>	<u>5,870,395</u>	30	<u>320,191</u>
TOTAL				\$ 96,173,807	\$ 92,431,827		\$ 9,992,399

¹ July 1, 2015 outstanding balance adjusted to the FY 2017 beginning of year (BOY), July 1, 2016.

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION V - COMPREHENSIVE ANNUAL FINANCIAL REPORT INFORMATION

Effective with the June 30, 2014 valuation, GASB disclosures (67 and 68, previously 25 and 27) were removed from the actuarial valuation report. GASB disclosures are now presented in a stand-alone report, which was issued in November 2015. A number of exhibits have been removed from this section as a result.

Tables V-1 and V-2 are exhibits required for the System’s Comprehensive Annual Financial Report (CAFR). The Government Finance Officers Association (GFOA) recommends showing at least six years of experience in each of these exhibits in the CAFR. Table V-1 presents an analysis of financial experience for the valuation year, and Table V-2 presents the Solvency Test which shows the portion of actuarial liability covered by assets.

Table V-1	
SDCERS - Unified Port District	
ANALYSIS OF FINANCIAL EXPERIENCE	
Gain and Loss in Actuarial Liability During Years Ended June 30	
Resulting from Differences Between Assumed Experience	
and Actual Experience	
Type of Activity	<i>Gain (or Loss) for Year ending June 30, 2015</i>
Investment Income	\$ 4,094,200
Combined Liability Experience	<u>1,906,267</u>
Gain (or Loss) During Year from Financial Experience	\$ 6,000,467
Non-Recurring Gain (or Loss) Items (e.g., Contributions, Assumption Changes)	<u>(5,654,814)</u>
Composite Gain (or Loss) During Year	\$ 345,653

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION V - COMPREHENSIVE ANNUAL FINANCIAL REPORT INFORMATION

**Table V-2
SDCERS - Unified Port District
SOLVENCY TEST
Actuarial Liabilities For
(\$ in thousands)**

Valuation Date	(A)	(B)	(C)	Reported Assets ¹	Portion of Actuarial Liabilities Covered by Reported Assets		
	Active Member Contributions	Retirees And Beneficiaries	Remaining Active Members' Liabilities		(A)	(B)	(C)
2015 ⁸	\$ 21,857	\$ 285,175	\$ 146,742	\$ 357,600	100%	100%	34.46%
2014	22,613	261,029	149,630	333,229	100	100	33.14
2013 ⁷	23,744	230,880	155,402	302,322	100	100	30.69
2012	21,236	218,954	141,824	277,822	100	100	26.53
2011 ⁶	19,138	207,854	127,845	259,315	100	100	25.28
2010	21,999	150,188	138,280	233,788	100	100	44.55
2009	20,784	137,803	130,112	223,879	100	100	50.18
2008 ⁵	19,397	123,029	124,611	245,580	100	100	82.78
2007 ⁴	18,374	115,021	113,143	230,585	100	100	85.90
2006 ³	16,140	101,542	102,955	203,286	100	100	83.15
2005	15,122	86,242	96,708	163,691	100	100	64.45
2004	12,885 ²	75,994	86,487	141,375	100	100	60.70

¹ Actuarial Value of Assets.

² Estimated.

³ Reflects contingent liabilities (13th check), DROP reserves, and IRC Section 415 limits.

⁴ The actuarial liability on June 30, 2007 and after is based on the entry age actuarial funding method. All prior years are based on the projected unit credit actuarial funding method.

⁵ Reflects revised actuarial and economic assumptions.

⁶ Reflects revised actuarial and economic assumptions.

⁷ Reflects revised actuarial and economic assumptions.

⁸ Reflects revised actuarial and economic assumptions.

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

Table A-1 Reconciliation of Member Data Unified Port District								
	<u>Active</u>	<u>Terminated Vested</u>	<u>Terminated Non-Vested</u>	<u>Disabled</u>	<u>Retired</u>	<u>Beneficiaries</u>	<u>DROP</u>	<u>Totals</u>
Participants as of 7/1/2014	385	113	172	64	337	79	38	1,188
New Entrants	21							21
Returned to Work	0							0
Vested Terminations	(12)	12						0
Non-Vested Terminations			0					0
Retirements	(4)	(5)			17		(8)	0
DROP	(12)						12	0
Disabilities		(2)		1		1		0
New Continuants						4		4
New Dissolutions ¹				1	2		2	5
Benefits Ceased ²	0	0	0	(4)	(6)	(1)	0	(11)
Lump Sum Cashout	0	0	0					0
Transferred Out	0	0						0
Miscellaneous Adjustments	(1)	0	(6)	0	(2)	(1)	0	(10)
Participants as of 7/1/2015	377	118	166	62	348	82	44	1,197

¹ Includes participants who may have previously had a frozen benefit and retired from a different plan

² Includes deaths and benefits that were terminated or suspended

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

Table A-2				
SDCERS - Unified Port District				
Active Member Data				
	<u>June 30, 2015</u>	<u>June 30, 2014</u>	<u>% Change</u>	
<u>Total</u>				
Count	377	385	-2.1%	
Average Current Age	46.6	46.5	0.2%	
Average Service	12.6	12.6	-0.1%	
Average Pensionable Earnings	\$ 86,303	\$ 83,905	2.9%	
Annual Pensionable Earnings	\$ 32,536,320	\$ 32,303,585	0.7%	
Average Valuation Compensation ¹	\$ 86,303	\$ 83,905	2.9%	
Annual Valuation Compensation ¹	\$ 32,536,320	\$ 32,303,585	0.7%	
Service Without Permissive Service Purchased	11.9	11.9	0.1%	
Members with Paid Purchased Service	60	65	-7.7%	
Members with Any Purchased Service	68	77	-11.7%	
Amount of Paid Purchased Service	215	191	12.4%	
Amount of Total Purchased Service	263	276	-4.8%	
<u>General</u>				
Count	272	281	-3.2%	
Average Current Age	48.9	48.1	1.7%	
Average Service	13.1	12.4	5.6%	
Average Pensionable Earnings	\$ 79,922	\$ 76,953	3.9%	
Annual Pensionable Earnings	\$ 21,738,683	\$ 21,623,703	0.5%	
Average Valuation Compensation ¹	\$ 79,922	\$ 76,953	3.9%	
Annual Valuation Compensation ¹	\$ 21,738,683	\$ 21,623,703	0.5%	
Service Without Permissive Service Purchased	12.4	11.8	5.1%	
Members with Paid Purchased Service	41	38	7.9%	
Members with Any Purchased Service	46	46	0.0%	
Amount of Paid Purchased Service	152	127	19.6%	
Amount of Total Purchased Service	185	182	1.6%	
<u>Safety</u>				
Count	105	104	1.0%	
Average Current Age	40.5	42.0	-3.6%	
Average Service	11.3	13.2	-14.4%	
Average Pensionable Earnings	\$ 102,835	\$ 102,691	0.1%	
Annual Pensionable Earnings	\$ 10,797,638	\$ 10,679,882	1.1%	
Average Valuation Compensation ¹	\$ 102,835	\$ 102,691	0.1%	
Annual Valuation Compensation ¹	\$ 10,797,638	\$ 10,679,882	1.1%	
Service Without Permissive Service Purchased	10.6	12.2	-13.1%	
Members with Paid Purchased Service	19	27	-29.6%	
Members with Any Purchased Service	22	31	-29.0%	
Amount of Paid Purchased Service	63	64	-1.8%	
Amount of Total Purchased Service	78	95	-17.1%	

¹ The definition of valuation compensation differs from pensionable earnings due to IRS 401(a).

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

Table A-3 SDCERS - Unified Port District Non-Active Participant Data						
	Count			Average Age		
	June 30, 2015	June 30, 2014	%Change	June 30, 2015	June 30, 2014	%Change
<u>Total</u>						
Retired	392	375	4.5%	67.6	67.5	0.1%
Disabled	62	64	-3.1%	63.6	63.7	-0.2%
Beneficiaries	<u>82</u>	<u>79</u>	<u>3.8%</u>	<u>75.2</u>	<u>75.1</u>	<u>0.1%</u>
Payee Total	536	518	3.5%	68.3	68.2	0.1%
DROP Participants	44	38	15.8%	57.3	57.5	-0.4%
Deferred Vested ¹	284	285	-0.4%	49.9	49.5	0.8%
Vested < 5 (10) yrs svc ²	183	192	-4.7%			
<u>General</u>						
Retired	312	307	1.6%	69.7	69.3	0.6%
Disabled	41	44	-6.8%	67.6	67.4	0.3%
Beneficiaries	<u>74</u>	<u>72</u>	<u>2.8%</u>	<u>76.8</u>	<u>76.5</u>	<u>0.4%</u>
Payee Total	427	423	0.9%	70.7	70.3	0.6%
DROP Participants	21	22	-4.5%	61.9	60.6	2.1%
Deferred Vested ¹	247	249	-0.8%	50.5	50.2	0.6%
Vested < 5 (10) yrs svc ²	155	165	-6.1%			
<u>Safety</u>						
Retired	80	68	17.6%	59.4	59.7	-0.5%
Disabled	21	20	5.0%	55.9	55.7	0.4%
Beneficiaries	<u>8</u>	<u>7</u>	<u>14.3%</u>	<u>60.3</u>	<u>60.4</u>	<u>-0.2%</u>
Payee Total	109	95	14.7%	58.8	58.9	-0.2%
DROP Participants	23	16	43.8%	53.1	53.3	-0.4%
Deferred Vested ¹	37	36	2.8%	45.6	44.2	3.2%
Vested < 5 (10) yrs svc ²	28	27	3.7%			

¹ Includes all participants having a contribution balance still on account with SDCERS.

² 10 years of service required for vesting if terminated prior to December 31, 2002.

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Table A-4 SDCERS - Unified Port District Non-Active Participant Data						
	Total Annual Benefit			Average Annual Benefit		
	June 30, 2015	June 30, 2014	%Change	June 30, 2015	June 30, 2014	%Change
<u>Total</u>						
Retired	\$ 19,572,584	\$ 17,991,964	8.8%	\$ 49,930	\$ 47,979	4.1%
Disabled	1,686,471	1,616,266	4.3%	27,201	25,254	7.7%
Beneficiaries	<u>1,483,989</u>	<u>1,425,272</u>	<u>4.1%</u>	<u>18,097</u>	<u>18,041</u>	<u>0.3%</u>
Payee Total	\$ 22,743,044	\$ 21,033,503	8.1%	\$ 42,431	\$ 40,605	4.5%
DROP Participants	\$ 3,198,750	\$ 2,676,069	19.5%	\$ 72,699	\$ 70,423	3.2%
Deferred Vested ¹	\$ 5,803,736	\$ 5,286,762	9.8%	\$ 20,436	\$ 18,550	10.2%
<u>General</u>						
Retired	\$ 13,370,233	\$ 12,857,328	4.0%	\$ 42,853	\$ 41,881	2.3%
Disabled	835,166	832,498	0.3%	20,370	18,920	7.7%
Beneficiaries	<u>1,304,355</u>	<u>1,272,708</u>	<u>2.5%</u>	<u>17,626</u>	<u>17,676</u>	<u>-0.3%</u>
Payee Total	\$ 15,509,755	\$ 14,962,534	3.7%	\$ 36,323	\$ 35,372	2.7%
DROP Participants	\$ 946,206	\$ 1,048,681	-9.8%	\$ 45,057	\$ 47,667	-5.5%
Deferred Vested ¹	\$ 4,882,043	\$ 4,513,369	8.2%	\$ 19,765	\$ 18,126	9.0%
<u>Safety</u>						
Retired	\$ 6,202,351	\$ 5,134,636	20.8%	\$ 77,529	\$ 75,509	2.7%
Disabled	851,305	783,769	8.6%	40,538	39,188	3.4%
Beneficiaries	<u>179,633</u>	<u>152,565</u>	<u>17.7%</u>	<u>22,454</u>	<u>21,795</u>	<u>3.0%</u>
Payee Total	\$ 7,233,289	\$ 6,070,970	19.1%	\$ 66,360	\$ 63,905	3.8%
DROP Participants	\$ 2,252,544	\$ 1,627,388	38.4%	\$ 97,937	\$ 101,712	-3.7%
Deferred Vested ¹	\$ 921,694	\$ 773,393	19.2%	\$ 24,911	\$ 21,483	16.0%

¹ Includes all participants having a contribution balance still on account with SDCERS. Annual benefit for deferred vested is the contribution balance in account as the valuation date.

**SDCERS-UNIFIED PORT DISTRICT
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APPENDIX A - MEMBERSHIP INFORMATION

**Table A-5
SDCERS - Unified Port District
Distribution of Active Members (Excludes DROP Participants) as of June 30, 2015
Total UPD**

Age	Years of Service										Total Count	Average Salary	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up			
Under 25	3	-	-	-	-	-	-	-	-	-	-	3	\$ 66,862
25 to 29	5	2	1	-	-	-	-	-	-	-	-	8	75,380
30 to 34	6	6	17	3	-	-	-	-	-	-	-	32	79,427
35 to 39	2	4	22	20	1	-	-	-	-	-	-	49	80,707
40 to 44	1	1	25	28	14	2	-	-	-	-	-	71	93,247
45 to 49	1	1	15	24	18	6	2	-	-	-	-	67	90,477
50 to 54	-	1	14	15	21	14	6	1	1	-	-	73	90,185
55 to 59	2	2	8	13	14	6	3	-	-	-	-	48	82,827
60 to 64	-	1	4	6	7	3	-	-	-	-	-	21	82,254
65 to 69	-	-	2	1	1	-	-	-	-	-	-	4	55,421
70 and up	-	-	1	-	-	-	-	-	-	-	-	1	45,647
Total Count	20	18	109	110	76	31	11	1	1	-	-	377	
Avg. Salary	\$ 73,445	\$ 86,549	\$ 79,386	\$ 85,694	\$ 94,237	\$ 97,789	\$ 93,832	\$ 140,010	\$ 64,446	\$ -	\$ -		\$ 86,303

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

Table A-6 SDCERS - Unified Port District Retirees (Includes DROP Participants), Disabled, and Beneficiaries Tabulated by Attained Age/Benefit Effective Date Total UPD											
Plan Year	Age										Total
	Under 50	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 and up	
Pre-1996	-	1	2	4	5	7	6	9	17	8	59
1996	1	1	-	-	-	1	-	5	2	-	10
1997	-	1	1	-	-	1	-	4	-	-	7
1998	-	1	1	1	1	4	7	5	1	2	23
1999	-	1	1	1	-	2	3	1	-	1	10
2000	-	1	-	-	2	4	5	2	1	2	17
2001	1	1	1	-	1	3	4	2	1	-	14
2002	-	1	2	1	10	1	5	-	-	-	20
2003	-	-	-	1	3	3	7	1	1	1	17
2004	1	-	-	-	8	9	7	-	1	-	26
2005	-	-	-	4	9	5	1	-	-	-	19
2006	1	-	3	3	9	4	3	-	-	-	23
2007	-	-	1	8	5	14	1	1	2	-	32
2008	-	-	3	6	7	4	1	1	1	-	23
2009	1	-	3	8	13	7	1	-	-	-	33
2010	1	-	5	4	11	-	-	-	-	-	21
2011	-	12	17	19	16	4	1	3	-	-	72
2012	-	-	7	5	7	1	1	1	1	1	24
2013	-	6	9	2	1	3	-	-	1	-	22
2014	2	9	11	10	3	1	-	-	-	1	37
2015	-	9	7	9	-	1	1	-	-	-	27
Total	8	44	74	86	111	79	54	35	29	16	536

Surviving spouses benefit effective date no longer based on participant's original date of retirement.

Average Age at Retirement/Disability	58.4
Average Current Age	68.3
Average Annual Pension	\$ 42,431

**SDCERS-UNIFIED PORT DISTRICT
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APPENDIX A - MEMBERSHIP INFORMATION

Data Assumptions and Practices

In preparing our data, we relied on information supplied by the SDCERS' staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. Our methodology for obtaining the data used for the valuation is based upon the following assumptions and practices:

- Service for Actives and Inactives was calculated using "SDCERS Srv Credit" which is benefited service credit. An adjusted date of hire is retroactively calculated from the valuation date. Purchased Service that has been paid for is included in the SDCERS Srv Credit field. Purchased Service that has been contracted for, but not paid as of the valuation date is assumed to be paid in full, and this service will be reflected in the projected benefit.
- Valuation Salary will be the maximum of "Current Annual Pensionable Salary," "1 Yr Prior Fiscal Year Pensionable Salary," "2 Yr Prior Fiscal Year Pensionable Salary," "3 Yr Prior Fiscal Year Pensionable Salary," "4 Yr Prior Fiscal Year Pensionable Salary," or an annualized "Last Pay Period Sum Pensionable Salary."
- New hires with a "Date of Entry" after 6/30/2014 had their "Current Annual Pensionable Salary" annualized based on accrued service to date.
- If the "Contrib Rate" was not provided, the prior year contribution for the member was used.
- For accounts having duplicate records in the Actives and Inactives by Social Security Number, the information from the latest payroll date is regarded as most-up-to-date. The other record is treated as out-of-date and invalid.
- For duplicate records (based on SSN and Benefit Type) in the payee file, records having the same plan and same benefit type but different benefit amounts, we have added those benefit amounts together.
- Records on the provided "Member" file are considered to be Active if they have no "Date of Death," no "Date of Separation," do not have a retiree record and they received pay in the last pay period (Last Pay Period = 26 or 27) of the current FY.
- Records on the "Member" file are considered to be Inactive if they do not have a "Date of Death," do not have a retiree record and either have a "Date of Separation" or have a "Last Pay Period" earlier than the last pay period of the current FY.
- For Inactives, the supplemental file "HighestFiscalYearPensionableSalary_DFRD and INAC Members_20150828_Final.xlsx" was used for the "Average Compensation." If a participant was not provided in the supplemental file, "Average Compensation" will be the maximum of the annualized pay over the prior year and the last four fiscal years' pensionable salaries.

**SDCERS-UNIFIED PORT DISTRICT
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APPENDIX A - MEMBERSHIP INFORMATION

- We assume that any active member found in the inactive data last year has returned to work and should be valued as active.
- Records on the “Payee” file are considered in pay status if their benefit is not suspended.
- Pension Benefit for retirees for each plan was calculated by summing “Monthly Pension,” “Monthly Annuity,” “COLA Annuity,” “Surviving Spouse Annuity,” and “COLA Pension” and subtracting “DRO Reduction Amt.” The “DRO Reduction Amt” field is mainly for Qualified Domestic Relations Order purposes. The “13th Check Supplement” field is added as an annual benefit and the “Corbett Supplement” is annualized for new retirees in the City only. It is assumed the payment is annual for retirees already in pay status prior to this valuation.
- Members retiring since the prior valuation date and not having a “13th Check Supplement Amount” will have their projected “13th Check Supplement Amount” calculated assuming \$30 multiplied by the “13th Check Supplement Years.”
- Payees’ “Cola Pension” and “Star Cola Pension” do not include a COLA as of July 1 2015. These COLA increases were provided in the supplemental file “Taxable COLA_FY2015_20150825b_Final Sent to Cheiron.xlsx.”
- Members may retire and receive benefits from multiple plans (e.g., a Unified Port District member could have also worked for the Airport Authority); we will value each Member’s blended benefit individually. This will result in the counts being slightly higher than actual counts due to people having more than one benefit payable from multiple plans.
- We assume any retiree found in last year’s “Payee” file and not in this year’s file has died without a beneficiary and should be removed from the valuation data.
- We assume all deceased retirees with payments continuing to a beneficiary have already been accounted for in the “Payee” file.
- We exclude any payee receiving \$0.00 from a blended benefit plan.
- The Final 415 Regulations were used to calculate the present value of Member benefits over the Internal Revenue Service Code 415 Benefit Limits.

**SDCERS-UNIFIED PORT DISTRICT
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APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

The SDCERS Board has the authority to select economic and demographic assumptions for the Plan. The assumptions used in this report reflect the results of a full experience study performed by Cheiron covering the period July 1, 2007 through June 30, 2010, as well as an economic experience study performed by Cheiron and presented to the SDCERS Board in November 2015.

1. Investment Return Rate

SDCERS' assets are assumed to earn 7.125% net of investment expenses. This assumption is scheduled to decline to 7.00% for the 2016 valuation.

2. Inflation Rate

An inflation assumption of 3.175% compounded annually is used for projecting the total annual payroll growth for amortization of the non-Police UAL. This assumption is scheduled to decline to 3.05% for the 2016 valuation.

3. Administrative Expense Assumption

Administrative expenses are assumed to be \$738,000 for FY 2017, increasing by 2.50% annually. Of this amount, two-thirds, or \$492,000, has been included in the FY 2017 ADC. For FY 2018 and for all fiscal years following, 100% of the expected administrative expenses will be added to the ADC.

4. Interest Credited to Member Contributions

7.125%, compounded annually.

5. Salary Increase Rate

Inflation component: 3.175%

The additional merit component:

Table B-1		
Years of Service at Valuation Date	General	Safety
0	5.00%	8.00%
1	4.00%	7.00%
2	3.00%	6.00%
3	2.00%	3.50%
4	1.00%	2.00%
5+	0.50%	0.50%

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APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

6. Cost-of-Living Increase in Benefits

Assumed to be 2.0% per annum, compounded annually.

7. COL Annuity Benefit

For active Members, the COL annuity benefit is valued by adding to the liabilities one-sixth of accumulated member contribution accounts and using a load factor of 2.5% for future member contributions. Miscellaneous Plan Members do not receive a COL annuity benefit.

8. Member Refunds

Part of the employee contribution rate is subject to potential “offset” by the employer. That “offset” and the related accumulated interest are not to be refunded to employees at termination. However, such offsets are not directly reflected in either the employee contributions or related refund calculations.

9. Rates of Termination

<u>Service</u>	<u>General</u>	<u>Safety</u>
0	11.00%	8.80
1	10.00	7.72
2	9.00	6.62
3	8.00	5.53
4	7.00	4.41
5	5.50	3.31
6	4.50	3.16
7	4.50	3.09
8	4.25	3.01
9	4.25	2.94
10	4.00	2.89
11	4.00	2.77
12	4.00	2.70
13	4.00	2.63
14	4.00	2.58
15	4.00	2.52
16	4.00	2.46
17	4.00	2.41
18	4.00	2.38
19	4.00	2.37
20	4.00	2.35
21	4.00	2.34
22+	4.00	2.33

10% of terminating employees, with 5+ years of service at termination, are assumed to subsequently work for a reciprocal employer and receive 3.675% pay increases per year.

**SDCERS-UNIFIED PORT DISTRICT
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APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

10. Rates of Disability

Table B-3 SDCERS - Unified Port District Rates of Disability at Selected Ages		
<u>Age</u>	<u>General</u>	<u>Safety</u>
20	0.02%	0.25%
25	0.03	0.25
30	0.04	0.25
35	0.06	0.35
40	0.08	0.45
45	0.12	0.55
50	0.20	0.65
55	0.35	0.75
60	0.45	--

60% of the General disabilities and 80% of the Safety disabilities are assumed to be industrial disability retirements. Non-industrial disability retirement is subject to service requirement.

11. Rates of Mortality for Active Lives

To reflect improvements in mortality since the date of the tables, the mortality tables have been modified to reflect actual experience through June 30, 2010 and include a projection to 2013.

All active members follow the RP2000 Combined Healthy table (male and female) projected to 2013.

Table B-4 SDCERS - Unified Port District Rates of Mortality for Active Lives at Selected Ages		
<u>Age</u>	<u>General and Safety</u>	
	<u>Male</u>	<u>Female</u>
20	0.03%	0.02%
25	0.03	0.02
30	0.04	0.02
35	0.07	0.04
40	0.10	0.06
45	0.13	0.09
50	0.17	0.13
55	0.28	0.25
60	0.55	0.47
65	1.06	0.91
70	1.83	1.57

50% of active member deaths are assumed to be industrial deaths for Safety members and all active member deaths are assumed to be non-industrial deaths for other members.

**SDCERS-UNIFIED PORT DISTRICT
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APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

12. Rates of Mortality for Retired Healthy Lives

To reflect improvements in mortality since the date of the tables, the mortality tables have been modified to reflect actual experience through June 30, 2010. No modifications have been made to project future mortality improvements. In the next experience study we will examine the mortality experience and consider the projection of future improvement.

General retired healthy participants use the RP2000 Combined Healthy table (male and female). Safety female members use the RP2000 Combined Healthy female table, set forward one year.

Table B-5				
SDCERS - Unified Port District				
Rates of Mortality for Retired Healthy Lives at Selected Ages				
<u>Age</u>	<u>General</u>		<u>Safety</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
40	0.11%	0.07%	0.11%	0.08%
45	0.15	0.11	0.15	0.12
50	0.21	0.17	0.21	0.19
55	0.36	0.27	0.36	0.31
60	0.67	0.51	0.67	0.58
65	1.27	0.97	1.27	1.10
70	2.22	1.67	2.22	1.86
75	3.78	2.81	3.78	3.10
80	6.44	4.59	6.44	5.08
85	11.08	7.74	11.08	8.64
90	18.34	13.17	18.34	14.46

**SDCERS-UNIFIED PORT DISTRICT
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APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

13. Rates of Mortality for Retired Disabled Lives

To reflect improvements in mortality since the date of the tables, the mortality tables have been modified to reflect actual experience through June 30, 2010. No modifications have been made to project future mortality improvements. In the next experience study, we will examine the mortality experience and consider the projection of future improvement.

The mortality tables used for disabled retirees are variations of the CALPERS Disability Tables (male and female):

Table B-6				
SDCERS - Unified Port District				
Rates of Mortality for Disabled Lives at Selected Ages				
<u>Age</u>	General		Safety	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
40	1.45%	0.67%	0.19%	0.20%
45	1.65	0.99	0.25	0.26
50	1.63	1.25	0.44	0.36
55	1.86	1.58	0.56	0.55
60	2.19	1.63	0.78	0.80
65	2.99	1.97	1.39	1.18
70	3.76	3.02	2.24	1.72
75	5.42	3.92	3.59	2.67
80	7.90	5.56	6.93	4.53
85	12.48	9.58	11.80	8.02

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APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

14. The Rates of Retirement

Rates of Retirement are shown in the table below. Retirement rates include both service retirements and entry into DROP.

Table B-7 SDCERS - Unified Port District Rates of Retirement by Service Years				
<u>Service</u>	<u>General - Old Plan</u>		<u>Safety - Old Plan</u>	
	<u>Prior to age 62</u>	<u>Age 62 or greater</u>	<u>Prior to age 55</u>	<u>Age 55 or greater</u>
5-9	--	30.0%	--	9.0%
10	--	40.0	--	40.0
11	--	35.0	--	40.0
12	--	35.0	--	40.0
13	--	35.0	--	40.0
14	--	35.0	--	40.0
15	--	32.5	--	31.5
16	--	32.5	--	31.5
17	--	32.5	--	31.5
18	--	32.5	--	31.5
19	--	32.5	--	31.5
20	40.5	40.0	35.0	50.0
21	33.3	25.0	20.0	25.0
22	35.1	25.0	25.0	30.0
23	36.9	25.0	30.0	35.0
24	38.7	25.0	35.0	40.0
25	40.5	37.5	40.0	45.0
26	42.3	37.5	45.0	50.0
27	44.1	37.5	50.0	55.0
28	45.9	37.5	55.0	60.0
29	47.7	37.5	60.0	65.0
30	49.5	42.5	100.0	100.0
31	51.3	42.5	100.0	100.0
32	53.1	47.5	100.0	100.0
33	54.9	47.5	100.0	100.0
34	56.7	47.5	100.0	100.0
35+	100.0	100.0	100.0	100.0

**SDCERS-UNIFIED PORT DISTRICT
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APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

For vested deferred participants, we assume that retirement will occur provided they have at least five years of service (at least ten years of service if terminated prior to December 31, 2002) on the later of attained age or:

General Members: Earlier of age 62 or age 55 and 20+ years of service

Safety Members: Earlier of age 55 or age 50 and 20+ years of service

If the inactive participant is not vested, the liability is the contributions with interest.

15. Family Composition Assumptions

80% of men and 55% of women were assumed married at retirement. A female spouse is assumed to be three-years younger than her male spouse.

16. Member Contributions for Spousal Continuance

All active Members contribute towards a 50% survivor continuance. However, Members who are unmarried at retirement may either be refunded that specific part of their contributions, or they may leave such contributions on account and receive an incremental benefit that is the actuarial equivalent of such contributions.

17. Deferred Member Actuarial Accrued Benefit

The benefit was estimated based on information provided by SDCERS staff. The data used to value the estimated deferred benefit were date of birth, date of hire, date of termination, and last pay. Based on the data provided, service credit, highest average salary, and deferred retirement age were estimated. The estimates were used to compute the retirement benefit, upon which the liabilities are based. For those participants without sufficient data or service, accumulated participant contribution balances, with interest, were used as the actuarial accrued liability.

18. DROP Account Balances

For DROP participants still working, the liability for the account balances in the asset information received from SDCERS staff was adjusted to assume average commencement in 2½ years and an interest crediting rate of 1.7%. Thereafter, it was assumed the account balance would be converted to an annuity at an interest rate of 3.0% over an average period of 10 years. The 10-year period was selected to average among the available DROP payment elections, including a lump sum, life expectancy, and 20 years. The liability for pre-2006 DROP account balances still left on account was valued assuming they would be paid out until age 70½, with an interest crediting rate of 1.7%. The liability for the remaining account balances was adjusted based on the DROP annuity rate in effect at the Member's benefit effective date.

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APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

These adjustments are applied to the DROP account balance values provided in the financial statements. The account balance liability is allocated to each individual Tier (e.g., General) based on the total amount of the DROP account balances for that Tier in the valuation data.

19. Other

The contribution requirements and benefit values of a plan are calculated by applying actuarial assumptions to the benefit provisions and Member information furnished, using the actuarial funding methods described in the following section.

Actual experience of SDCERS will not coincide exactly with assumed experiences, regardless of the choice of the assumptions, the skill of the actuary, or the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments to the computed contribution rate. From time to time it becomes appropriate to modify one or more of the assumptions to reflect experience trends, but not random year-to-year fluctuations.

20. Changes Since Last Valuation

In November 2015, the SDCERS Board voted to reduce the discount rate and wage inflation assumptions by 0.125% from 7.25% to 7.125% and 3.3% to 3.175%, respectively. These assumption changes have been reflected in this report. The Board also voted to reduce both assumptions by an additional 0.125% in the next valuation.

In January 2015, the Board voted to account for expected administrative expenses explicitly in the actuarially determined contribution (ADC) with a three-year phase in. This being the second year of the phase in, the portion of the assumed administrative expenses included in the ADC was adjusted from one-third to two-thirds.

The DROP interest crediting and annuity rates used to value the liability for account balances were decreased from 1.8% to 1.7% and from 3.6% to 3.0%, respectively, to reflect the Board's adoption of these rates at its November 2015 meeting.

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Actuarial Funding Method

The Entry Age Normal funding method was used for active employees, whereby the normal cost rate is computed as the average level annual percent of pay required to fund the retirement benefits for all Members between their dates of hire and assumed dates of retirement. The EAN actuarial liability is the difference between the Plan's total present value of future benefits and the present value of future normal costs, calculated for each sub-group (e.g., General). The unfunded actuarial liability is the difference between the actuarial liability and the actuarial value of assets, and is allocated to each sub-group based on its liability.

The unfunded actuarial liability is amortized by annual payments. The payments are determined so that they will be a level percentage of pay, assuming payroll increases 3.175% per year. The UAL is amortized over different closed periods depending on the source of the loss. The entire UAL as of June 30, 2007 is amortized over 14 years. Subsequent gains and losses are amortized over 15 years, changes in assumptions over 30 years, and changes in benefits over 20 years (or period over which benefit changes are paid, if shorter). Funding surplus, if any, is amortized over 30 years. Finally, if necessary, there is an additional UAL cost component to ensure that there is no negative amortization in any year.

2. Asset Valuation Method

For the purposes of determining the Unified Port District's actuarially determined contribution to SDCERS, we use a smoothed actuarial value of assets. The asset smoothing method dampens the volatility in asset values that could occur because of the fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process. Assets are assumed to be used exclusively for the use of retirement benefits and expenses.

The actuarial value of assets each year is equal to 100% of the *expected actuarial value of assets*¹ plus 25% of the difference between the current market value of assets and the expected actuarial value of assets. In no event will the actuarial value of assets ever be less than 80% of the market value of assets nor greater than 120% of the market value of assets.

3. Changes Since Last Valuation

None

¹ The expected actuarial value of assets is equal to the prior year's actuarial value of assets increased with actual contributions made, decreased with actual disbursements made, all items (prior assets, contributions and disbursements) further adjusted with expected investment returns for the year.

APPENDIX C - SUMMARY OF PLAN PROVISIONS

In 1963, the San Diego Unified Port District (UPD) contracted with the City of San Diego to have its employees participate in the City's SDCERS-administered retirement plan. In 2002, the voters of the City of San Diego voted to add section 149 to the City Charter, allowing public agencies to contract directly with SDCERS to participate in the SDCERS trust fund, and to have SDCERS administer the retirement benefits established by each contracting employer. Pursuant to Charter section 149, the Port has contracted directly with SDCERS to administer the retirement plan for its employees since January 1, 2003. The change in contracting parties brought about by this Charter amendment did not affect any rights or benefits that UPD employees earned before 2003.

1. Membership Requirement

Membership is mandatory upon first day of employment for all Safety Members and for General Members hired before January 1, 2009. (§0103) For Miscellaneous Members hired on or after January 1, 2009, the Member is a participant for purposes of establishing reciprocity, but does not begin earning service credit until the 1st day of their 6th year of employment (§ 0102).*

2. Monthly Compensation Base for Benefits

Highest one-year average for General Members hired before October 1, 2006, and Safety Members hired before January 1, 2010. For General Members hired on or after October 1, 2006, and all Miscellaneous Members, highest three-year average. (§0102)

For Safety Members hired on or after January 1, 2010, the highest three-year average during his or her final three-year period while contributing to the Plan. (§0102 and Amendment 1) For Safety Members hired on or after January 1, 2013, the highest consecutive 36 months, divided by 36. (Gov. Code §7522.32)

Subject to a 10% increase for General Members who joined the SDCERS plan before November 9, 2001 and were contributing to the Plan on January 1, 2002 and all Safety Members, if the Member elects such increase in lieu of an increased benefit formula.

3. Service Retirement

Eligibility

General Members:

Age 62 with five years of service (excludes five year permissible purchased service), or age 55 with 20 years of service. Miscellaneous Members begin earning service credit during their sixth year of employment (§ 0300).

* All “§” references are to the Unified Port District Plan Document.

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APPENDIX C - SUMMARY OF PLAN PROVISIONS

Safety Members:

For Safety Members hired before January 1, 2010, age 55 with five years of service (excludes five year permissible purchased service), or age 50 with 20 years of service. For Safety Members hired on or after January 1, 2010, age 55 with five years of service (excludes five year permissible purchased service), or any age with 30 years of service with the UPD (§ 0301). For Safety Members hired on or after January 1, 2013, age 50 with 5 or more years of earned service. (Gov. Code §7522.25)

Benefit

General Members:

For General Members hired before November 10, 2001, choice of (1) formula in place on December 31, 2001 with 10% increase in Final Average Compensation, (2) “Andrecht” formula effective as of January 1, 2002, or (3) “2.5% at 55” multiplier with a benefit cap of 90% of Final Average Compensation (§ 0300(g)).

For General Members hired on or after November 10, 2001 and before January 1, 2009, “2.5% at 55” multiplier with a benefit cap of 90% of Final Average Compensation (§ 0300(h)).

For Miscellaneous Members hired on or after January 1, 2009, the formula is: (1) for years 1-5 of service credit, 0.75% of Final Compensation per year; (2) for years 6-10 of service credit, 1% of Final Compensation per year; (3) for years 11-15 of service credit, 1.25% of Final Compensation per year; and (4) beginning with service credit year 15, 1.5% of Final Compensation per year (§ 0301(g)).

Executive General Members hired before January 1, 2009 receive “3% at 55” multiplier without an increase in Final Average Compensation.

Safety Members:

For Safety Members hired before January 1, 2010 choice of formula in place on December 31, 2001 with a 10% increase in Final Average Compensation or “Andrecht” 3% formula without increases in Final Average Compensation. Effective April 1, 2004, there is a benefit cap of 90% of Final Average Compensation.

Safety Members hired on or after January 1, 2010 receive a 3% multiplier without an increase in Final Average Compensation.

Safety Members hired on or after January 1, 2013 receive 2% per year of service at age 50, increasing to 2.7% at age 57, not to exceed 90% of final compensation. (Gov. Code §7522.25)

For all employees, there is an additional benefit equal to the annuitized Member COL Annuity contributions at retirement date.

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APPENDIX C - SUMMARY OF PLAN PROVISIONS

In all cases, there is an integration feature which provides for 2/3 of the formula multiplier on the first \$400 of monthly Final Average Compensation. The 2/3 equals the Social Security integration factor.

Table C-1						
SDCERS - Unified Port District						
Member Service Retirement Accrual Factors						
Age	General Members hired prior to 1/1/2009				Safety	
	Pre 12/31/2001	Andrecht	Post 4/1/2004	Management	Pre 12/31/2001	Andrecht
50	--	--	--	--	2.50%	3.00%
51	--	--	--	--	2.54%	3.00%
52	--	--	--	--	2.58%	3.00%
53	--	--	--	--	2.62%	3.00%
54	--	--	--	--	2.66%	3.00%
55	2.00%	2.25%	2.50%	3.00%	2.70%	3.00%
56	2.00%	2.25%	2.60%	3.00%	2.70%	3.00%
57	2.00%	2.25%	2.70%	3.00%	2.70%	3.00%
58	2.00%	2.25%	2.80%	3.00%	2.70%	3.00%
59	2.08%	2.25%	2.90%	3.00%	2.70%	3.00%
60	2.16%	2.30%	3.00%	3.00%	2.70%	3.00%
61	2.24%	2.35%	3.00%	3.00%	2.70%	3.00%
62	2.31%	2.40%	3.00%	3.00%	2.70%	3.00%
63	2.39%	2.45%	3.00%	3.00%	2.70%	3.00%
64	2.47%	2.50%	3.00%	3.00%	2.70%	3.00%
65 and up	2.55%	2.55%	3.00%	3.00%	2.70%	3.00%

**SDCERS-UNIFIED PORT DISTRICT
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APPENDIX C - SUMMARY OF PLAN PROVISIONS

GENERAL:

Table C-2 SDCERS - Unified Port District	
For Vested Members hired before	
<u>January 1, 2009 who terminated----</u>	<u>--the accrual factors are--</u>
Prior to January 1, 1997	See Table C-4
January 1, 1997 - December 31, 2001	Pre 12/31/2001 factors above
January 1, 2002 - March 31, 2004	Pre 12/31/2001 factors above with 10% increase in Final Average Compensation, Andrecht, or Executives (if applicable)
April 1, 2004 - Present	Pre 12/31/2001 factors above with 10% increase in Final Average Compensation, Andrecht, Post 4/1/2004 or Executives (if applicable)

SAFETY:

Table C-3 SDCERS - Unified Port District	
For Vested Members who terminated--	
<u>January 1, 2002</u>	<u>--the accrual factors are--</u>
Prior to January 1, 2002	See Table C-4
January 1, 2002 - Present	Pre 12/31/2001 factors above with 10% increase in Final Average Compensation or Andrecht

**SDCERS-UNIFIED PORT DISTRICT
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX C - SUMMARY OF PLAN PROVISIONS

Table C-4 SDCERS - Unified Port District Pre-1997¹ Member Service Retirement Accrual Factors		
<u>Age</u>	<u>General</u>	<u>Safety</u>
50	--	2.00%
51	--	2.10%
52	--	2.22%
53	--	2.34%
54	--	2.47%
55	1.48%	2.62%
56	1.55%	2.62%
57	1.63%	2.62%
58	1.72%	2.62%
59	1.81%	2.62%
60	1.92%	2.62%
61	1.99%	2.62%
62	2.09%	2.62%
63	2.20%	2.62%
64	2.31%	2.62%
65 and up	2.43%	2.62%

¹ Safety Members have the same calculation factors through December 31, 2001

Maximum Benefit

General Members hired before January 1, 2009: 90% of Final Average Compensation if Post 4/1/2004 factor is chosen.

Safety Members: 90% of Final Average Compensation

General Executive Members: None.

Unmodified Form of Payment

Monthly payments continued for the life of the Member, with 50% continuance to the eligible surviving spouse, domestic partner, or dependent child under 21 years of age upon Member's death. If there is no eligible spouse, the Member may receive either a lump sum payment equal to the accumulated surviving spouse contributions or an actuarially equivalent annuity (§ 24.0601).

Note: Unified Port District employees participate in Social Security.

APPENDIX C - SUMMARY OF PLAN PROVISIONS

4. Non-Industrial Disability

Eligibility

Ten years of service. Miscellaneous Members hired on or after January 1, 2009 who do not begin to accrue service credit until their sixth year of employment, must have 10 years of service credit, which means 15 years of Port employment (§ 0504).

Benefit

General Members:

For General Members hired before January 1, 2009, the greater of 1.5% per year of service, one-third of final compensation, or the earned service retirement benefit (§ 0506).

For Miscellaneous Members hired on or after January 1, 2009, the greater of 11% of Final Compensation or earned service retirement benefit (§ 0507).

Safety Members:

Greater of 1.8% per year of service, one-third of final compensation, or the earned service retirement benefit (§ 0505).

5. Industrial Disability

Eligibility

No age or service requirement for Members hired before January 1, 2009. Miscellaneous Members hired on or after January 1, 2009 must have five years of Port employment to be eligible for an industrial disability benefit (§ 0500).

Benefit

General Members:

For General Members hired before January 1, 2009, greater of one-third of final compensation, or the earned service retirement benefit, if eligible (§ 0502).

For Miscellaneous Members hired on or after January 1, 2009, the greater of 11% of Final Compensation or earned service retirement benefit, if eligible (§ 0503).

Safety Members:

Greater of one-half of final compensation, or the earned service retirement benefit (§ 0501).

6. Non-Industrial Death Before Eligible to Retire

Refund of employee contributions with interest plus one month's salary for each completed year of service to a maximum of six months' salary. Miscellaneous Members hired on or after January 1, 2009 must have five years of Port employment to be eligible for a non-industrial death benefit (§ 0701).

APPENDIX C - SUMMARY OF PLAN PROVISIONS

7. Non-Industrial Death After Eligible to Retire for Service

50% of earned benefit payable to eligible surviving spouse, domestic partner, or dependent child under 21 years of age. General Members hired on or after January 1, 2009 must have five years of Port employment to be eligible for a non-industrial death benefit (§ 0701, § 0703).

8. Industrial Death

50% of the final average compensation preceding death, payable to eligible surviving spouse, domestic partner, or dependent child under 21 years of age. Miscellaneous Members hired on or after January 1, 2009 must have five years of Port employment to be eligible for an industrial death benefit.

9. Death After Retirement

Maximum Benefit

Continuance to surviving beneficiary depending on benefit selection made at retirement.

\$2,000 payable in lump sum to the beneficiary or the estate of the retiree (§ 0708).

10. Withdrawal Benefits

Pre-12/8/76 Hires

If contributions left on deposit, entitled to earned benefits, commencing any time after eligible to retire.

Post-12/7/76 Hires

Less than five years of service (ten years of service if employee terminated before December 31, 2002) – Refund of accumulated employee contributions with interest, or may keep deposits with SDCERS and earn additional interest, and use service with a reciprocal system to establish eligibility for earned benefits upon concurrent retirement from reciprocal system. (§ 0205, 0401).

All Members

Five or more years of service (ten or more years of service if employee terminated before December 1, 2002); there will be a one-time Andrecht-related 7% increase in benefit.

APPENDIX C - SUMMARY OF PLAN PROVISIONS

11. Post-Retirement Cost-of-Living Benefit

General and Safety Members:

Based on changes in Consumer Price Index, to a maximum of 2% per year (§ 1301).

12. COL Annuity

Actuarial equivalent of accumulated contributions in cost-of-living annuity account at time of retirement (§ 0300).

13. Member Contributions

Vary by age at time of entrance into SDCERS (§ 0200). While a significant portion of these contributions may be “offset,” such offsets are not directly reflected in either the employee contributions or related refund calculations. Rates include cost of providing spouse’s continuance, cost of providing COL Annuity, and cost of funding final one-year average in lieu of final three-year average (§ 0102, 0200, 0201). Miscellaneous Plan Members, hired on or after January 1 2013, do not make contributions to the Plan.

**SDCERS-UNIFIED PORT DISTRICT
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APPENDIX C - SUMMARY OF PLAN PROVISIONS

Table C-5 SDCERS - Unified Port District Employee Contribution Rates¹						
Entry Age	Hired Before January 1, 2013				Hired On or After January 1, 2013	
	General		Safety		Safety	
	Integrated Members		Integrated Members		Integrated Members	
	First \$400/Mo.	Over \$400/Mo.	First \$400/Mo.	Over \$400/Mo.	First \$400/Mo.	Over \$400/Mo.
20	5.52%	8.28%	7.75%	11.63%	6.25%	9.25%
21	5.59	8.38	7.86	11.79	6.50	9.50
22	5.66	8.49	7.95	11.93	6.50	10.00
23	5.73	8.60	8.06	12.09	6.75	10.25
24	5.80	8.70	8.16	12.24	7.00	10.50
25	5.89	8.83	8.27	12.41	7.25	10.75
26	5.97	8.95	8.37	12.56	7.25	11.00
27	6.04	9.06	8.49	12.73	7.50	11.25
28	6.12	9.18	8.59	12.89	7.75	11.75
29	6.20	9.30	8.71	13.06	8.00	12.00
30	6.28	9.42	8.81	13.22	8.25	12.25
31	6.37	9.55	8.93	13.39	8.50	12.75
32	6.45	9.67	9.03	13.55	8.75	13.00
33	6.53	9.79	9.15	13.72	9.00	13.50
34	6.61	9.91	9.27	13.90	9.25	13.75
35	6.70	10.05	9.39	14.08	9.25	14.00
36	6.79	10.18	9.50	14.25	9.50	14.50
37	6.88	10.32	9.62	14.43	9.75	14.75
38	6.97	10.45	9.75	14.62	10.00	15.00
39	7.05	10.58	9.87	14.80	10.25	15.50
40	7.15	10.72	9.99	14.99	10.50	15.75
41	7.24	10.86	10.12	15.18	10.75	16.25
42	7.33	10.99	10.24	15.36	11.00	16.75
43	7.42	11.13	10.37	15.56	11.50	17.00
44	7.52	11.28	10.51	15.76	11.75	17.50
45	7.61	11.42	10.63	15.94	12.00	18.00
46	7.71	11.56	10.77	16.15	12.00	18.00
47	7.81	11.71	10.90	16.35	12.00	18.00
48	7.91	11.86	11.03	16.54	12.00	18.00
49	8.01	12.01	11.16	16.74	12.00	17.75
50	8.10	12.15				
51	8.21	12.32				
52	8.31	12.47				
53	8.42	12.63				
54	8.53	12.79				
55	8.63	12.95				
56	8.74	13.11				
57	8.87	13.31				

¹ Contribution Rate = Normal Cost + Cost-of-Living Rate

**SDCERS-UNIFIED PORT DISTRICT
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APPENDIX C - SUMMARY OF PLAN PROVISIONS

Interest: 8.00%
Salary: 5.00%
Mortality: 83 Group Annuity Mortality (GAM) male
(Males set back 2 years, Females set back 8 years)

Changes to the salary scale and mortality table effective with the June 30, 1994 valuation were applied to the then existing Member rates.

14. Internal Revenue Code Compliance

Benefits provided by the SDCERS' Trust Fund are subject to the limitations set forth in Section 415 in accordance with the "grandfather" election in Section 415(b) (10) of the Internal Revenue Code.

As of the June 30, 2006 valuation, active participants' benefit payments were limited by Section 415 of the Internal Revenue Code. As of the June 30, 2007 valuation, all benefit payments were limited by Section 415 of the Internal Revenue Code.

15. Deferred Retirement Option Plan

Effective April 1, 1997, a deferred retirement option plan (DROP) was created and offered to UPD Members under the SDCERS Plan as an alternative method of benefit accrual. The DROP provision is effective under this Plan on January 1, 2003 (§1200). Members eligible for service retirement are eligible to participate in DROP, but only those hired before October 1, 2005 may enter the program (§1201).

A participant in DROP may leave DROP at any time before the end of his or her designated DROP participation period by voluntarily leaving Port employment (§1202). The maximum DROP participation period is 60 months (§1201).

A DROP participation account is a nominal account established with the Retirement System, which is credited with the following amounts (§1203):

- The Member's monthly service retirement allowance, credited monthly, calculated at the date of DROP entry and increased each year by a cost-of-living adjustment.
- The Member's supplemental 13th check benefit, if applicable, credited annually.
- 3.05% of base compensation, payable by the Unified Port District and credited bi-weekly.
- 3.05% of base compensation, payable by the Member and credited bi-weekly.
- Interest on the above amounts, as determined by the Board.

When a Member leaves DROP and Port employment, they begin to collect their monthly service retirement allowance, their supplemental 13th check benefit (if applicable), and the amounts credited to their DROP participation account, payable as a single lump sum distribution, as a 240-month annuity with equal payments, or any other form approved by the Board and subject to applicable provisions of the Internal Revenue Code (§1206).

**SDCERS-UNIFIED PORT DISTRICT
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APPENDIX C - SUMMARY OF PLAN PROVISIONS

DROP is not intended to jeopardize the tax-qualified status of the retirement system under the rules and regulations of the Internal Revenue Service. Benefits provided under this division are subject to the limitations of Section 415 of the Internal Revenue Code relating to the amount of benefits that can be paid (§1207).

16. Blended Benefit with Participating Agencies

Members may retire and receive benefits from multiple Plans (e.g., a Unified Port District employee could have also worked for the Airport Authority).

17. Changes Since Last Valuation

The California Public Employees' Pension Reform Act (PEPRA) was effective January 1, 2013 and has a significant impact on the plan provisions for most employees hired on or after that date. PEPRA participants first appeared in the census data with this June 30, 2015 valuation.

Note: The summary of major plan provisions is designed to outline principal plan benefits. If the SDCERS staff should find the plan summary not in accordance with the actual provisions, the actuary should immediately be alerted so the proper provisions are valued.

APPENDIX D - GLOSSARY OF TERMS

1. Actuarial Liability

The Actuarial Liability is the difference between the present value of all future System benefits and the actuarial value of future normal costs. This is also referred to by some actuaries as “accrued liability” or “actuarial accrued liability.”

2. Actuarial Assumptions

Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Actuarial assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

3. Accrued Service

Service credited under the System which was rendered before the date of the actuarial valuation.

4. Actuarial Equivalent

A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.

5. Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement System benefits between future normal cost and actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

6. Actuarial Gain/(Loss)

The difference between actual experience and actuarial assumption anticipated experience during the period between two actuarial valuation dates.

7. Actuarial Present Value

The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment.

APPENDIX D - GLOSSARY OF TERMS

8. Actuarially Determined Contribution (ADC)

Contribution determined each year based on the SDCERS Board's adopted funding policy. The term also exists in GASB 67 and 68 as a contribution determined by the actuary in accordance with Actuarial Standards of Practice, but no further guidance is provided.

9. Amortization

Paying off an interest-discounted amount with periodic payments of interest and principal — as opposed to paying off with lump sum payment.

10. Normal Cost

The actuarial present value of retirement System benefits allocated to the current year by the actuarial funding method.

11. Set Back/Set Forward

Set back is a period of years that a standard published table (i.e., mortality) is referenced backwards in age. For instance, if the set back period is 2 years and the participant's age is currently 40, then the table value for age 38 is used from the standard published table. It is the opposite for set forward. A system would use set backs or set forwards to compensate for mortality experience in their work force.

12. Unfunded Actuarial Liability (UAL)

The difference between actuarial liability and the actuarial value of assets.

Most retirement systems have unfunded actuarial liability. They arise each time new benefits are added and each time an actuarial loss is realized.

The existence of unfunded actuarial liability is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liability, and the trend in its amount (after due allowance for devaluation of the dollar).