



REGULAR MEETING
BOARD OF DIRECTORS
WEDNESDAY, NOVEMBER 15, 2017 – 6:30PM
3 DAIRY LANE, BELMONT CALIFORNIA

AGENDA

1. OPENING

- A. Call to Order
- B. Establishment of Quorum
- C. Pledge of Allegiance

2. PUBLIC COMMENT

Members of the public may address the Board on the Consent Agenda or any item of interest within the jurisdiction of the Board but not on its agenda today. In compliance with the Brown Act, the Board cannot discuss or act on items not on the agenda. Please complete a speaker's form and give it to the District Secretary. Each speaker is limited to three (3) minutes.

3. AGENDA REVIEW: ADDITIONS/DELETIONS AND PULLED CONSENT ITEMS

4. ACKNOWLEDGEMENTS/PRESENTATIONS

- A. 5-Year Service Anniversary on 12/10/2017 – Laura Ravella, Administrative Assistant
- B. 5-Year Service Anniversary on 12/11/2017 – Candy Pina, Administrative Services Manager
- C. 5-Year Service Anniversary on 12/21/2017 – Tammy Rudock, General Manager

5. CONSENT AGENDA

All matters on the Consent Agenda are to be approved by one motion. If Directors wish to discuss a consent item other than simple clarifying questions, a request for removal may be made. Such items are pulled for separate discussion and action after the Consent Agenda as a whole is acted upon.

- A. Approve Minutes for the Regular Board Meeting of October 26, 2017
- B. Approve Expenditures from October 20, 2017 through November 7, 2017

6. HEARINGS AND APPEALS

None.

**7. MPWD FY 2016-2021 CAPITAL IMPROVEMENT PROGRAM
AND 2016 COP (CERTIFICATES OF PARTICIPATION) FINANCING**

- A. Receive Progress Report on 2017 Water Main Replacement Project
- B. Receive Progress Report on Hillcrest Pressure Regulating Station Project

- C. Discuss Extending Construction of Davey Glen Water Main Replacement Project to El Camino Real, in Conjunction with City of Belmont Sewer Replacement Project, and using \$181,500 of MPWD Capital Reserves

8. REGULAR BUSINESS AGENDA

- A. Receive Report on 2017 MPWD Classification Study by KOFF & Associates, and Consider Resolution 2017-20 Approving MPWD Employee Classification Descriptions dated November 2017
- B. Review MPWD PARS OPEB Trust Account Investment Structure and Performance, and Consider Resolution 2017-21 Approving 2018 Investment Portfolio
- C. Consider Resolution 2017-22 Authorizing Participation in the PARS Combination IRS Section 115 Trust Plan, including the MPWD Other Post-Employment Benefits (OPEB) Plan and Establishment of the Pension Rate Stabilization Program (PRSP) to Pre-Fund MPWD Pension Liabilities, and Authorizing an Initial PRSP Deposit in the amount of \$100,000
- D. Discuss Second DRAFT MPWD Debt Management Policy
- E. Discuss Second DRAFT MPWD Cash Reserve Policy

9. MANAGER'S AND BOARD REPORTS

- A. General Manager's Report, including Water Conservation Progress Summary
 1. Supplemented by Administrative Services Manager's Report
 2. Supplemented by Operations Manager's Report
 3. Supplemented by District Engineer's Report
- B. Financial Reports
 1. Receive Financial Reports for Month Ended October 31, 2017
- C. Director Reports

10. COMMUNICATIONS

11. ADJOURNMENT

This agenda was posted at the Mid-Peninsula Water District's office, 3 Dairy Lane, in Belmont, California, and on its website at www.midpeninsulawater.org.

ACCESSIBLE PUBLIC MEETINGS

Upon request, the Mid-Peninsula Water District will provide written agenda materials in appropriate alternative formats, or disability-related modification or accommodation (including auxiliary aids or services), to enable individuals with disabilities to participate in public meetings. Please contact the District Secretary at (650) 591-8941 to request specific materials and preferred alternative format or auxiliary aid or service at least 48 hours before the meeting.

Next Board Meeting: Thursday, December 21, 2017, at 6:30PM

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REGULAR MEETING
OF THE BOARD OF DIRECTORS
OF THE MID-PENINSULA WATER DISTRICT

October 26, 2017
Belmont, California

1. OPENING

A. Call to Order:

The regular meeting of the Mid-Peninsula Water District Board of Directors was called to order by President Stuebing at 6:32PM.

B. Establishment of Quorum:

PRESENT: Directors Stuebing, Warden, Vella, Linvill and Zucca

ABSENT: None

A quorum was present.

ALSO PRESENT: General Manager Tammy Rudock, Operations Manager Rene Ramirez, District Secretary/Administrative Services Manager Candy Pina, District Counsel Julie Sherman, District Engineer Joubin Pakpour and District Treasurer Jeff Ira.

C. Pledge of Allegiance – The Pledge of Allegiance was led by District Treasurer, Jeff Ira.

2. PUBLIC COMMENTS

Mr. Moreno, a resident at 1624 Fairway Drive in Belmont expressed concern about the accuracy of the new AMI system and the fact that he felt his consumption was higher than before his old meter was replaced. He also sought clarification on the date of a read when that date falls on a weekend.

The Board addressed Mr. Moreno's concerns by explaining variations in meter mechanics, testing parameters, calibrations and flow factors. It was suggested that staff exchange his AMI meter for another one and test it to confirm it was functioning properly.

3. AGENDA REVIEW: ADDITIONS/DELETIONS AND PULLED CONSENT ITEMS

None.

4. ACKNOWLEDGEMENTS/PRESENTATIONS

None.

5. CONSENT AGENDA

A. Approve Minutes for the Regular Board Meeting of September 28, 2017.

Directors Warden and Linvill abstained from the vote due to their absence from last month's Board meeting.

B. Approve Expenditures from September 22, 2017 through October 19, 2017

Director Zucca moved to approve the minutes for the Regular Board Meeting on September 28, 2017, and expenditures from September 22, 2017 through October 19,

2017. Director Vella seconded and it was unanimously approved, with Directors Warden and Linvill abstaining from approving item 5.A.

6. HEARINGS AND APPEALS

None.

7. MPWD FY 2016-2021 CAPITAL IMPROVEMENT PROGRAM AND 2016 COPs (CERTIFICATES OF PARTICIPATION) FINANCING

A. Receive 2016 COP Financing Reconciliation and Project Fund Quarterly Reports for the period July 1, 2017 through September 30, 2017

Staff briefly highlighted the Quarterly Reconciliation Report and new graph, and Dan Bergmann of IGService presented the Quarterly Project Fund Report and reviewed the new program expenditures graph.

Director Zucca inquired about interest on revenue. General Manager Rudock confirmed that earned interest remains with the project fund and is reinvested accordingly.

Director Linvill commented that the dividend and interest terminology on the two reports is confusing. Staff replied the bank statements refer to the funds as dividends and would correct on their next reconciliation report.

8. REGULAR BUSINESS AGENDA

A. Consider Resolution 2017-19 Authorizing 2017 revisions to MPWD Personnel Manual

General Manager Rudock reported that she met and conferred twice with employees on the proposed revisions, and District Counsel reviewed and approved all edits.

There was a brief discussion about the mandatory vacation policy and how it is managed.

Director Zucca moved to approve. Director Vella seconded and it was unanimously approved.

B. Receive Overview of MPWD Organization and Staff Position Duties

General Manager Rudock presented the Board with the MPWD Organizational Chart and a summary of staff duties.

Directors commented on delegation of authority when staff is on leave, and the potential for outsourcing.

General Manager Rudock shared that staff has been focused on response to an increased number of development requests and additional reporting requirements in Operations and Administration, which has created the need to consider hiring one or two additional employees, and determine if the need would be temporary or permanent.

C. Consider and Approve MPWD 2018 Board Meeting Schedule

The Board discussed the proposed MPWD 2018 Board meeting schedule, and it was unanimously approved.

102 **D. Review and Discuss DRAFT MPWD Debt Management Policy**
103 General Manager Rudock presented the DRAFT Debt Management Policy, which was
104 created from a CSDA policy template and several other public agencies and water
105 districts with debt policies. District Counsel provided review comments and they will be
106 incorporated in the next DRAFT. Input from the MPWD's Municipal Finance Advisor,
107 Bud Levine, and MPWD's Financial Auditor, David Becker, will also be shared in the
108 next DRAFT.

109
110 Director Zucca offered feedback and provided written comments to the General
111 Manager. Director Linvill stated the policy conformed to the CSDA policy template and
112 other public agency debt policies she was familiar with. Staff will bring back a revised
113 DRAFT next month.

114
115 **E. Review and Discuss DRAFT MPWD Cash Reserve Policy**
116 General Manager Rudock presented the DRAFT Cash Reserve Policy. She researched
117 other public agency and water district policies and created the proposed policy from
118 many samples. District Counsel provided review comments and they will be incorporated
119 in the next DRAFT.

120
121 Input from the MPWD's Municipal Finance Advisor, Bud Levine, and MPWD's Financial
122 Auditor, David Becker, will also be shared in the next DRAFT.

123
124 The Board discussed ideas for reducing the total amount of cash reserves below the
125 existing policy target of \$5 million, and narrowing the reserve funds to two—Working
126 Capital and Capital. Staff will bring back a revised DRAFT next month.

127
128 **9. MANAGER AND BOARD REPORTS**

129 **A. General Manager's Report, including Water Conservation Progress Report**
130 General Manager Rudock reported that the staff quarterly water conservation report was
131 included in the agenda pack for Board review and shared staff is excited about the
132 student Lego Robotics Team opportunity, referred to us by District treasurer, Jeff Ira.
133 She also confirmed that the AB 1234 ethics training has been completed by all Board
134 members and appointed officials as required.

135
136 **1. Supplemented by Administrative Services Manager's Report**

137 Administrative Services Manager Pina reported on the added graph to the quarterly
138 COP CIP reconciliation report and also advised that a sweep account for annual debt
139 service payments is now being utilized.

140
141 **2. Supplemented by Operations Manager's Report**

142 Operations Manager Ramirez reported no meter installations took place last month
143 due to staffing levels and priorities. He provided an update on the hit hydrant at
144 1902 Oak Knoll Dr.

145
146 **3. Supplemented by District Engineer's Report**

147 District Engineer Pakpour gave a brief update on active projects.

148
149 **B. Financial Reports**

150 1. Receive Financial Reports for Month Ended September 30, 2017

151 General Manager Rudock reported District financials are on or exceeding projected
152 targets. Total operating expenses less depreciation was at 25.2%, water commodity
153 revenues were at 36.9%, and total operating revenues at 35.4% of budget.
154

155 2. Receive General Manager's Annual Report for Fiscal Year Ended June 30, 2017
156 General Manager Rudock reported on the financial highlights and trends related to FY
157 2016/2017.
158

159 **C. Director Reports**

160 Director Linvill reported she participated in the Hetch Hetchy tour and the Davey Park
161 Grand Opening Ceremony.
162

163 Director Zucca reported he met with Belmont Mayor Charles Stone.
164

165 Director Stuebing reported that he met with Belmont Mayor Charles Stone. He advised
166 that Mayor Stone was open and receptive to the idea of a brief CIP presentation by a
167 MPWD Board member to the City Council.
168

169 **10. COMMUNICATIONS**

170 General Manager Rudock reported that at SFPUC's Annual Meeting for Wholesale
171 Customers and BAWSCA earlier this month it was announced that the "Lead Sampling
172 of Drinking Water in California Schools Program" would become a larger mandatory
173 program and added responsibility for the MPWD.
174

175 **11. ADJOURNMENT**

176 The meeting was adjourned at 9:12PM.
177
178

179 _____
180 DISTRICT SECRETARY
181

182 APPROVED:
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185 _____
186 BOARD PRESIDENT

Accounts Payable

Checks by Date - Summary by Check Date

User: candyp
 Printed: 11/9/2017 7:20 AM



Check No	Vendor No	Vendor Name	Check Date	Check Amount
515	ADPPRFEE	ADP Payroll Fees	10/20/2017	268.29
Total for 10/20/2017:				268.29
516	ACHORIG	ACH Origination	10/23/2017	203.90
Total for 10/23/2017:				203.90
529	ACHRETN	ACH Returns	10/25/2017	123.84
Total for 10/25/2017:				123.84
32789	ACWADUES	ACWA DUES	10/26/2017	14,030.00
32790	ACWA5661	ACWA JPIA	10/26/2017	43,782.55
32791	AIRGAS	AIRGAS, LLC	10/26/2017	128.76
32792	ATT60197	AT&T 60197	10/26/2017	79.90
32793	BLUELINE	BLUELINE RENTAL	10/26/2017	3,916.97
32794	CARQUEST	CARQUEST AUTO PARTS	10/26/2017	7.23
32795	COMCAST	COMCAST	10/26/2017	579.34
32796	COMCASTB	COMCAST BUSINESS	10/26/2017	629.81
32797	FASTSIGN	FASTSIGNS	10/26/2017	341.17
32798	LAURELYN	LAURELYLN GOERTZ	10/26/2017	3,285.00
32799	GSFLOWM	GOLDEN STATE FLOW MEASUREMEN	10/26/2017	619.84
32800	GRANITE	GRANITE ROCK, INC.	10/26/2017	221.07
32801	HOMEDPC	HOME DEPOT	10/26/2017	52.40
32802	DAVIDSON	DBA JRocket77 DESIGN & MARKETINC	10/26/2017	704.08
32803	MATCOTLS	MATCO TOOLS	10/26/2017	121.28
32804	PACOFFIC	PACIFIC OFFICE AUTOMATION	10/26/2017	18,503.81
32805	PARS	PARS	10/26/2017	300.00
32806	PG&E	PG&E CFM/PPC DEPT	10/26/2017	17,822.63
32807	PINA	CANDY PINA	10/26/2017	56.00
32808	PRECISE	PRECISE, INC.	10/26/2017	2,270.89
32809	RECOLOGY	RECOLOGY SAN MATEO	10/26/2017	620.05
32810	RUDOCK	TAMMY RUDOCK	10/26/2017	77.00
32811	SFWATER	SAN FRANCISCO WATER DEPT	10/26/2017	591,885.00
32812	SCHAAFWE	SCHAAF & WHEELER	10/26/2017	2,916.67
32813	SCOTSMAN	WILLIAMS SCOTSMAN	10/26/2017	538.00
32814	STANDINS	STANDARD INSURANCE COMPANY	10/26/2017	964.43
32815	TOWNEFOR	TOWNE FORD SALES	10/26/2017	517.34
32816	XIOINC	XIO, INC.	10/26/2017	808.00
32818	UB*00077	LESLIE ADAMS	10/26/2017	171.04
32819	UB*00066	TONYA AMANI	10/26/2017	6.34
32820	UB*00074	CASCADE DRILLING	10/26/2017	1,573.23
32821	UB*00081	PILAR CONTRERAS	10/26/2017	25.00
32822	UB*00067	DANIEL CORTOPASSI	10/26/2017	13.00
32823	UB*00079	JUNE DUTTA	10/26/2017	8.18
32824	UB*00068	NOREEN FORD	10/26/2017	6.58

Check No	Vendor No	Vendor Name	Check Date	Check Amount
32825	UB*00070	SANZIO GARCIA	10/26/2017	67.94
32826	UB*00076	ALDO GHIOZZI	10/26/2017	35.00
32827	UB*00080	KENDRA GLICK	10/26/2017	84.56
32828	UB*00071	BRIAN GOTTWALD	10/26/2017	193.02
32829	UB*00073	MOHAMMED HAZIN	10/26/2017	97.34
32830	UB*00065	JANE KOCHENDERFER	10/26/2017	43.46
32831	UB*00069	THE NOLAN TRUST MCGWIRE	10/26/2017	29.62
32832	UB*00075	PACIFIC SURFACING INC	10/26/2017	1,408.00
32833	UB*00072	HELEN PAO	10/26/2017	24.00
32834	UB*00064	PILIER CONSTRUCTION CO.	10/26/2017	488.39
32835	UB*00078	EMIL REHFELD	10/26/2017	144.36
Total for 10/26/2017:				710,198.28
500	HEALTHEQ	Health Equity	10/27/2017	200.00
501	CALPERS	CALPERS	10/27/2017	2,672.29
502	ICMACONT	ICMA contributions	10/27/2017	1,923.08
517	ADPPAYRL	adp	10/27/2017	10,143.28
518	ADPPAYRL	adp	10/27/2017	4,545.81
525	WFBUSCAR	WELLS FARGO BUSINESS CARD	10/27/2017	4,154.13
Total for 10/27/2017:				23,638.59
524	WFBUSCAR	WELLS FARGO BUSINESS CARD	10/30/2017	2,334.19
Total for 10/30/2017:				2,334.19
519	CALPERS	CALPERS	10/31/2017	7,422.11
520	HEALTHEQ	Health Equity	10/31/2017	652.08
521	ICMACONT	ICMA contributions	10/31/2017	666.24
522	ADPPAYRL	adp	10/31/2017	33,407.18
523	ADPPAYRL	adp	10/31/2017	13,834.93
1011	HYDROENC	HYDROSCIENCE ENGINEERS INC.	10/31/2017	25,713.63
1012	SCHAAFWE	SCHAAF & WHEELER	10/31/2017	5,611.57
Total for 10/31/2017:				87,307.74
32836	ATT60197	AT&T 60197	11/07/2017	1,530.33
32837	BAAQMD	BAY AREA AIR QUALITY MGMT DIST.	11/07/2017	332.00
32838	BAWSCA	BAY AREA WATER SUPPLY & CONSER	11/07/2017	3,560.63
32839	BPLANDSC	BAY POINTE LANDSCAPE	11/07/2017	9,150.00
32840	EQUIPMEN	BUS & EQUIPMENT REPAIR	11/07/2017	1,600.28
32841	CGUHLENB	C G UHLENBERG LLP	11/07/2017	1,325.00
32842	CARQUEST	CARQUEST AUTO PARTS	11/07/2017	68.29
32843	CINTS	CINTAS CORPORATION	11/07/2017	807.89
32844	GRANITE	GRANITE ROCK, INC.	11/07/2017	864.13
32845	DAVIDSON	DBA JRocket77 DESIGN & MARKETINC	11/07/2017	7,604.34
32846	LIFTOFFD	LIFTOFF DIGITAL	11/07/2017	705.00
32847	OFFICEDE	OFFICE DEPOT, INC.	11/07/2017	224.68
32848	PG&E	PG&E CFM/PPC DEPT	11/07/2017	2,878.02
32849	PRECISE	PRECISE, INC.	11/07/2017	625.68
32850	RANDB	ROBERTS & BRUNE CO. INC.	11/07/2017	34,092.13
32851	STEFFORD	STEFFORD BUSINESS, INC.	11/07/2017	1,720.00
32852	VALLEYOL	VALLEY OIL COMPANY	11/07/2017	1,034.02
32853	VERIZON	VERIZON WIRELESS	11/07/2017	889.58

Check No	Vendor No	Vendor Name	Check Date	Check Amount
			Total for 11/7/2017:	69,012.00
			Report Total (81 checks):	893,086.83



Pakpour Consulting Group, Inc.

MEMO

Agency: Mid-Peninsula Water District **Date** November 6, 2017
Attn: Board of Directors
Project Name: Karen, Mezes, Arthur, South & Folger Water Main Improvements **Project No.** 10012.16
Reference: Project Update
From: Joubin Pakpour, P.E. – District Engineer *JP*

Construction Status

On July 27, 2017, the Mid-Peninsula Water District (District) awarded Stoloski & Gonzalez, Inc. (S&G) the Karen, Mezes, Arthur, South & Folger Water Main Improvements Project. The contract was executed on August 4, 2017 and a pre-construction meeting was held on August 23, 2017. The District issued the Notice to Proceed for October 2, 2017. District employee Michael Anderson is providing full time, on-site inspection for this project.

S&G began construction along South Road on October 2, 2017. Work along South Road for October included potholing existing utility locations, installing three 3-valve assemblies to avoid shutdowns during service meter installations, transferring service connections on the existing 4-inch CIP water main to the larger 8-inch PVC main, and installing 1 fire hydrant assembly.

Change Orders

As of October 31, 2017, no change orders for this project have been processed.

Project Schedule and Request for Progress Payment No. 1

As of October 31, 2017, S&G completed 7% of the contractual work (**\$142,200.00**). Enclosed please find Progress Payment No. 1 due S&G for this period for **\$135,090.00** (value of work less 5% retention). The work performed to date has been satisfactory and payment is recommended.

	Current Month	Total	
Original Contract Amount		\$ 2,055,271.00	
Approved Change Orders	\$ 0.00	\$ 0.00	0%
Final Contract Amount		\$ 2,055,271.00	
Previously Paid		\$ 0.00	
Current Request (<i>Less Retention</i>)	\$ 135,090.00	\$ 135,090.00	
Retention	\$ 7,110.00	\$ 7,110.00	
Total Value of Work Completed	\$ 142,200.00	\$ 142,200.00	7%
Total Remaining on Contract		\$ 1,913,071.00	93%

Karen, Mezes, Arthur, South Folger Water Main Improvements
Progress Payment No. 01
Breakdown Summary

Karen Road	Current	Total	
Original Contract Amount		\$438,196	
Approved Change Orders	\$0.00	\$0.00	0%
Final Contract Amount		\$0.00	
Previously Paid		\$0.00	
Current Request (Less Retention)	\$0.00	\$0.00	
Retention	\$0.00	\$0.00	
Total Value of Work Completed	\$0.00	\$0.00	0%
Total Remaining on Contract		\$438,196.00	100%

Mezes Ave	Current	Total	
Original Contract Amount		\$235,278.00	
Approved Change Orders	\$0.00	\$0.00	0%
Final Contract Amount		\$0.00	
Previously Paid		\$0.00	
Current Request (Less Retention)	\$0.00	\$0.00	
Retention	\$0.00	\$0.00	
Total Value of Work Completed	\$0.00	\$0.00	0%
Total Remaining on Contract		\$235,278.00	100%

Arthur Ave	Current	Total	
Original Contract Amount		\$553,771.00	
Approved Change Orders	\$0.00	\$0.00	0%
Final Contract Amount		\$0.00	
Previously Paid		\$0.00	
Current Request (Less Retention)	\$0.00	\$0.00	
Retention	\$0.00	\$0.00	
Total Value of Work Completed	\$0.00	\$0.00	0%
Total Remaining on Contract		\$553,771.00	100%

South Road	Current	Total	
Original Contract Amount		\$366,929.00	
Approved Change Orders	\$0.00	\$0.00	0%
Final Contract Amount		\$366,929.00	
Previously Paid		\$0.00	
Current Request (less Retention)	\$135,090.00	\$135,090.00	
Retention	\$7,110.00	\$7,110.00	
Total Value of Work Completed	\$142,200.00	\$142,200.00	0%
Total Remaining on Contract		\$224,729.00	61%

Folger Drive	Current	Total	
Original Contract Amount		\$461,097.00	
Approved Change Orders	\$0.00	\$0.00	0%
Final Contract Amount		\$0.00	
Previously Paid		\$0.00	
Current Request (Less Retention)	\$0.00	\$0.00	
Retention	\$0.00	\$0.00	
Total Value of Work Completed	\$0.00	\$0.00	0%
Total Remaining on Contract		\$461,097.00	100%

Total (All Projects)	Current	Total	
Original Contract Amount		\$2,055,271.00	
Approved Change Orders	\$0.00	\$0.00	0%
Final Contract Amount		\$2,055,271.00	
Previously Paid		\$0.00	
Current Request (Less Retention)	\$135,090.00	\$135,090.00	
Retention	\$7,110.00	\$7,110.00	
Total Value of Work Completed	\$142,200.00	\$142,200.00	7%
Total Remaining on Contract		\$1,913,071.00	93%

Bid Item	Description	Original Contract Amount				Change Order			Revised Contract Amount			Earned This Period			Prior Billing			Total to Date		
		Unit	Unit Price	Qty.	Total Price	Qty.	Unit Price	Total Price	Qty.	Unit Price	Total Price	Qty.	Amount Earned	%	Qty.	Amount Earned	%	Qty.	Amount Earned	%
1	8" Fusible C900 PVC	LF	\$ 203	972	\$ 197,316.00	0	\$ 203	\$ -	972	\$ 203.00	\$ 197,316.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
2	8-inch Class 350 DIP	LF	\$ 309	1,563	\$ 482,967.00	0	\$ 309	\$ -	1563	\$ 309.00	\$ 482,967.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
3	10-inch Class 350 DIP	LF	\$ 336	785	\$ 263,760.00	0	\$ 336	\$ -	785	\$ 336.00	\$ 263,760.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
4	Dairy Lane - Fire Service Tie-in at Sta. 10+00 (Detail A)	LS	\$ 6,500	1	\$ 6,500.00	0	\$ 6,500	\$ -	1	\$ 6,500.00	\$ 6,500.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
5	Karen Road/O'Neill Avenue - Tie-in to 8" PVC at Sta. 11+79 (Detail B)	LS	\$ 8,500	1	\$ 8,500.00	0	\$ 8,500	\$ -	1	\$ 8,500.00	\$ 8,500.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
6	Karen Road/O'Neill Avenue - Tie-in to 12" ACP at Sta. 12+12 (Detail C)	LS	\$ 6,500	1	\$ 6,500.00	0	\$ 6,500	\$ -	1	\$ 6,500.00	\$ 6,500.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
7	Karen Road - Fire Service Tie-in at Sta. 13+97	LS	\$ 7,000	1	\$ 7,000.00	0	\$ 7,000	\$ -	1	\$ 7,000.00	\$ 7,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
8	Karen Road/Harbor Blvd - Tie-in to 12" ACP at Sta. 19+72 (Detail D)	LS	\$ 19,000	1	\$ 19,000.00	0	\$ 19,000	\$ -	1	\$ 19,000.00	\$ 19,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
9	Mezes Avenue - Tie-in to 6" CIP, Sta. 10+00 to 10+15 (Detail E)	LS	\$ 12,000	1	\$ 12,000.00	0	\$ 12,000	\$ -	1	\$ 12,000.00	\$ 12,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
10	Mezes Avenue - Tie-in to 6" CIP, Sta. 13+45 to 13+55 (Detail F)	LS	\$ 10,500	1	\$ 10,500.00	0	\$ 10,500	\$ -	1	\$ 10,500.00	\$ 10,500.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
11	Mezes Avenue/Lyon Avenue - Tie-in to 4" PVC, Sta. 20+59 to 20+88 (Detail G)	LS	\$ 23,000	1	\$ 23,000.00	0	\$ 23,000	\$ -	1	\$ 23,000.00	\$ 23,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
12	Arthur Avenue - Tie-in to 8" CIP, Sta. 10+00 to 10+10 (Detail H)	LS	\$ 10,900	1	\$ 10,900.00	0	\$ 10,900	\$ -	1	\$ 10,900.00	\$ 10,900.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
13	Arthur Avenue/Coronet Blvd - Tie-in to 8" CIP at Sta. 10+54 (Detail I)	LS	\$ 15,600	1	\$ 15,600.00	0	\$ 15,600	\$ -	1	\$ 15,600.00	\$ 15,600.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
14	Arthur Avenue/Covington Road - 6" DIP Modification (Detail J)	LS	\$ 12,700	1	\$ 12,700.00	0	\$ 12,700	\$ -	1	\$ 12,700.00	\$ 12,700.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
15	Arthur Avenue/Alameda de las Pulgas - Tie-in to 8" CIP at Sta. 20+93 (Detail K)	LS	\$ 16,000	1	\$ 16,000.00	0	\$ 16,000	\$ -	1	\$ 16,000.00	\$ 16,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
16	Middle Road/Notre Dame Avenue - 6"/8" CIP Tie-ins (Detail L)	LS	\$ 29,000	1	\$ 29,000.00	0	\$ 29,000	\$ -	1	\$ 29,000.00	\$ 29,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
17	South Road/Middle Road - 6" CIP Tie-in (Detail M)	LS	\$ 32,000	1	\$ 32,000.00	0	\$ 32,000	\$ -	1	\$ 32,000.00	\$ 32,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
18	South Road/Debbie Lane - 6" CIP Tie-in (Detail N)	LS	\$ 35,400	1	\$ 35,400.00	0	\$ 35,400	\$ -	1	\$ 35,400.00	\$ 35,400.00	0.5	\$ 17,700.00	50%	0	\$ -	0%	0.5	\$ 17,700.00	50%
19	South Road/Hainline Drive - 4" CIP Tie-in (Detail O)	LS	\$ 21,000	1	\$ 21,000.00	0	\$ 21,000	\$ -	1	\$ 21,000.00	\$ 21,000.00	0.5	\$ 10,500.00	50%	0	\$ -	0%	0.5	\$ 10,500.00	50%
20	South Road/Korbel Way - 4" CIP Tie-in (Detail P)	LS	\$ 18,000	1	\$ 18,000.00	0	\$ 18,000	\$ -	1	\$ 18,000.00	\$ 18,000.00	0.5	\$ 9,000.00	50%	0	\$ -	0%	0.5	\$ 9,000.00	50%
21	South Road Vannier Drive - 4" CIP Tie-in (Detail Q)	LS	\$ 18,500	1	\$ 18,500.00	0	\$ 18,500	\$ -	1	\$ 18,500.00	\$ 18,500.00	0.5	\$ 9,250.00	50%	0	\$ -	0%	0.5	\$ 9,250.00	50%
22	South Road/College View Way - 8" ACP Tie-in (Detail R)	LS	\$ 22,000	1	\$ 22,000.00	0	\$ 22,000	\$ -	1	\$ 22,000.00	\$ 22,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
23	Folger Drive - Tie-in to 10" DIP, Sta. 10+00 to 10+10 (Detail S)	LS	\$ 6,000	1	\$ 6,000.00	0	\$ 6,000	\$ -	1	\$ 6,000.00	\$ 6,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
24	Folger Drive/Notre Dame Avenue - Tie-in to 6" CIP, Sta. 17+95 to 18+00 (Detail T)	LS	\$ 7,000	1	\$ 7,000.00	0	\$ 7,000	\$ -	1	\$ 7,000.00	\$ 7,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
25	10" Gate Valve	EA	\$ 3,600	5	\$ 18,000.00	0	\$ 3,600	\$ -	5	\$ 3,600.00	\$ 18,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
26	8" Gate Valve	EA	\$ 2,500	42	\$ 105,000.00	0	\$ 2,500	\$ -	42	\$ 2,500.00	\$ 105,000.00	12	\$ 30,000.00	29%	0	\$ -	0%	12	\$ 30,000.00	29%
27	8" Fire Service Connection (Assembly)	EA	\$ 17,500	1	\$ 17,500.00	0	\$ 17,500	\$ -	1	\$ 17,500.00	\$ 17,500.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
28	6" Fire Hydrant Assembly	EA	\$ 12,500	12	\$ 150,000.00	0	\$ 12,500	\$ -	12	\$ 12,500.00	\$ 150,000.00	1	\$ 12,500.00	8%	0	\$ -	0%	1	\$ 12,500.00	8%
29	Fire Hydrant Bollard	EA	\$ 400	20	\$ 8,000.00	0	\$ 400	\$ -	20	\$ 400.00	\$ 8,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%

Bid Item	Description	Original Contract Amount				Change Order			Revised Contract Amount			Earned This Period			Prior Billing			Total to Date		
		Unit	Unit Price	Qty.	Total Price	Qty.	Unit Price	Total Price	Qty.	Unit Price	Total Price	Qty.	Amount Earned	%	Qty.	Amount Earned	%	Qty.	Amount Earned	%
30	Fire Hydrant Retaining Wall	EA	\$ 3,900	1	\$ 3,900.00	0	\$ 3,900	\$ -	1	\$ 3,900.00	\$ 3,900.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
31	2" Blow-Off Assembly	EA	\$ 4,200	1	\$ 4,200.00	0	\$ 4,200	\$ -	1	\$ 4,200.00	\$ 4,200.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
32	1" Combination Air Valve	EA	\$ 3,100	1	\$ 3,100.00	0	\$ 3,100	\$ -	1	\$ 3,100.00	\$ 3,100.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
33	8" PRV Station	LS	\$ 31,000	1	\$ 31,000.00	0	\$ 31,000	\$ -	1	\$ 31,000.00	\$ 31,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
34	Anode Test Station	EA	\$ 1,400	11	\$ 15,400.00	0	\$ 1,400	\$ -	11	\$ 1,400.00	\$ 15,400.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
35	2" Service Connection to Existing Meter	EA	\$ 3,700	1	\$ 3,700.00	0	\$ 3,700	\$ -	1	\$ 3,700.00	\$ 3,700.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
36	1.5" Service Connection	EA	\$ 3,500	1	\$ 3,500.00	0	\$ 3,500	\$ -	1	\$ 3,500.00	\$ 3,500.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
37	1" Service Connection with 2" Service line	EA	\$ 3,200	1	\$ 3,200.00	0	\$ 3,200	\$ -	1	\$ 3,200.00	\$ 3,200.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
38	1" or 5/8" Service Connection	EA	\$ 3,100	68	\$ 210,800.00	0	\$ 3,100	\$ -	68	\$ 3,100.00	\$ 210,800.00	15	\$ 46,500.00	22%	0	\$ -	0%	15	\$ 46,500.00	22%
39	Residential PRV	EA	\$ 400	3	\$ 1,200.00	0	\$ 400	\$ -	3	\$ 400.00	\$ 1,200.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
40	Service Meter Retaining Wall	EA	\$ 1,100	5	\$ 5,500.00	0	\$ 1,100	\$ -	5	\$ 1,100.00	\$ 5,500.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
41	Abandon Existing Fire Hydrant Assembly	EA	\$ 800	7	\$ 5,600.00	0	\$ 800	\$ -	7	\$ 800.00	\$ 5,600.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
42	Abandon Existing Gate Valve/Blow-Off	EA	\$ 450	25	\$ 11,250.00	0	\$ 450	\$ -	25	\$ 450.00	\$ 11,250.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
43	Traffic Striping and Markings	LS	\$ 25,000	1	\$ 25,000.00	0	\$ 25,000	\$ -	1	\$ 25,000.00	\$ 25,000.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
44	Type II Slurry Seal	SF	\$ 0.39	120,200	\$ 46,878.00	0	\$ 0.39	\$ -	120200	\$ 0.39	\$ 46,878.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
45	4" deeplift Pavement Repair at Karen Road	SF	\$ 12	2,900	\$ 34,800.00	0	\$ 12	\$ -	2900	\$ 12.00	\$ 34,800.00	0	\$ -	0%	0	\$ -	0%	0	\$ -	0%
46	Traffic Control	LS	\$ 45,000	1	\$ 45,000.00	0	\$ 45,000	\$ -	1	\$ 45,000.00	\$ 45,000.00	0.15	\$ 6,750.00	15%	0	\$ -	0%	0.15	\$ 6,750.00	15%
47	Street Sweeping	EA	\$ 600	36	\$ 21,600.00	0	\$ 600		36	\$ 600.00	\$ 21,600.00	0	\$ -	0%						
	Contract Amount				\$2,055,271.00			\$0.00			\$2,055,271.00									
	Amount Earned												\$142,200.00	7%		\$0.00	0%		\$142,200.00	7%
	Retention (5%)												(\$7,110.00)						(\$7,110.00)	
	Amount Due												\$135,090.00						\$135,090.00	
	Amount Remaining on Contract																		\$1,913,071.00	93%

Prepared By

JP

Joubin Pakpour, P.E.
District Engineer

Amount Remaining on Contract	\$1,913,071.00	93%
Total Retention Being Held	(\$7,110.00)	

**Karen, Mezes, Arthur, South & Folger Water Main Improvements
Mid-Peninsula Water District, Belmont, CA
October 1, 2017 thru October 31, 2017**



Construction funding sign



**Karen, Mezes, Arthur, South & Folger Water Main Improvements
Mid-Peninsula Water District, Belmont, CA
October 1, 2017 thru October 31, 2017**



Oct 10, 2017 - Installation of three valve set at Debbie Lane (South Road)

**Karen, Mezes, Arthur, South & Folger Water Main Improvements
Mid-Peninsula Water District, Belmont, CA
October 1, 2017 thru October 31, 2017**



Karen, Mezes, Arthur, South & Folger Water Main Improvements
Mid-Peninsula Water District, Belmont, CA
October 1, 2017 thru October 31, 2017



Oct 19 thru Oct 30, 2017—Meter connections (South Road)



AGENDA ITEM NO. 7.B.

DATE: November 15, 2017
TO: Board of Directors
FROM: Tammy Rudock, General Manager

SUBJECT: RECEIVE PROGRESS REPORT ON HILLCREST PRESSURE REGULATING STATION PROJECT

There is no written progress report for this project. The District Engineer will provide an update during the Board meeting.

BOARD ACTION: APPROVED:_____ DENIED:_____ POSTPONED:_____ STAFF DIRECTION:_____

UNANIMOUS_____ STUEBING_____ WARDEN_____ VELLA_____ LINVILL_____ ZUCCA_____



AGENDA ITEM NO. 7.C.

DATE: November 15, 2017
TO: Board of Directors
FROM: Rene A. Ramirez, Operations Manager

SUBJECT: DISCUSS EXTENDING CONSTRUCTION OF DAVEY GLEN WATER MAIN REPLACEMENT PROJECT TO EL CAMINO REAL, IN CONJUNCTION WITH CITY OF BELMONT SEWER REPLACEMENT PROJECT, AND USING \$181,500 OF MPWD CAPITAL RESERVES

RECOMMENDATION:

Discuss extension of the construction of the Davey Glen Road water main replacement project from a pressure reducing station down to El Camino Real about 400 feet as a part of the joint project with the City of Belmont's sewer improvements.

FISCAL IMPACT:

The current estimate from the design engineer, Schaaf & Wheeler, is \$181,500 including construction and 10% contingency. Funding for the additional 400 foot construction along Davey Glen Road would come from MPWD capital reserves.

The proposed extension section is parallel to the new mixed-use development project at 490 Davey Glen Road. The MPWD collected approximately \$500,000 in capacity charges from the developer for the project. Staff mentions this because the proposed project extension is a good representative use of such capital-based development charges. (Staff will be presenting at mid-year budget review a complete report of water capacity charges and water demand offset fees collected since implementation.)

DISCUSSION:

MPWD CIP project 15-43, the North Road and Davey Glen improvements, replaces 1,400 feet of old cast iron pipe water main under Davey Glen up to the Davey Glen pressure reducing station, which is about 400 feet west of El Camino Real. (The project description is attached for reference.) The 400 foot of remaining water main in Davey Glen to El Camino Real is also old cast iron pipe, which would be connected to a new water main on one end of Davey Glen and eventually to the new water main installed on

El Camino Real. It makes practical sense to extend the Davey Glen water main improvements down to El Camino Real.

Moreover, when staff learned that the City intends to overlay the entire length of Davey Glen with asphalt following the sewer and water improvements, it provided further justification to discuss the extension of the MPWD's water main replacement project. With that in mind, staff asked Schaaf & Wheeler to provide a cost estimate for the additional 400 feet of cast iron pipe replacement that could be brought to the Board's attention and for consideration. The engineering design costs for the 400 foot extension were covered within an existing project budget for engineering services.

As it stands before any engineering work is considered for the 400 feet of cast iron pipe under Davey Glen, the costs for District CIP project known as the Joint Water/Sewer Project with the City of Belmont (03-1621-CP), which includes water main replacement on Davey Glen Road, Belburn/Academy Avenues and Francis Avenue has gotten to a 95% design stage and has a water-only cost estimate of \$1,321,000. A ten-percent contingency would add another \$132,000 to the 95% estimate. The additional 400 feet of pipe replacement under Davey Glen is estimated to increase that estimated cost, including contingency, by \$181,500 for a potential project cost of \$1,634,500.

Attachments: Three Programmed Project Descriptions
Schaaf & Wheeler Engineer's Estimate of Probable Construction Costs – 95% Design –
dated 10/06/17 for the Joint Water/Sewer Project

BOARD ACTION: APPROVED:_____ DENIED:_____ POSTPONED:_____ STAFF DIRECTION:_____

UNANIMOUS_____ STUEBING_____ WARDEN_____ VELLA_____ LINVILL_____ ZUCCA_____

NORTH ROAD CROSS COUNTRY / DAVEY GLEN ROAD IMPROVEMENTS

PROJECT BACKGROUND

The water mains along Davey Glen Road were installed in 1961 and comprise of 600 LF of 6" cast iron pipe (CIP) and 800 LF of 8" CIP. Water is supplied to Davey Glen from Middle Road and a 6" CIP cross country (CC) water main, installed in 1962, extending down from North Road to where the 6" CIP on Davey Glen transitions to the 8" CIP. The CC water main runs beneath a 4 FT wide sidewalk along a dedicated easement. Beyond the edge of walk the terrain drops fairly steeply where at its base is an apartment complex pool and common area. Any breaks along this alignment could result in significant damage to both the hillside and the apartment complex below. This project abandons the CC water main and replaces 1,400 LF of CIP water main along Davey Glen Road with 8" DIP to correct fire flow deficiencies upon the CC abandonment. Hydraulic analysis indicates a fire flow decrease of up to 38% from approximately 2,400 gpm to 1,500 gpm with these improvements. However, combining this project with the South Road Improvements (DSA 045) brings the majority of the fire flows to above 2,000 gpm with a select few around 1,800 gpm. Distribution System Analysis No. 044.

PROPOSED IMPROVEMENTS

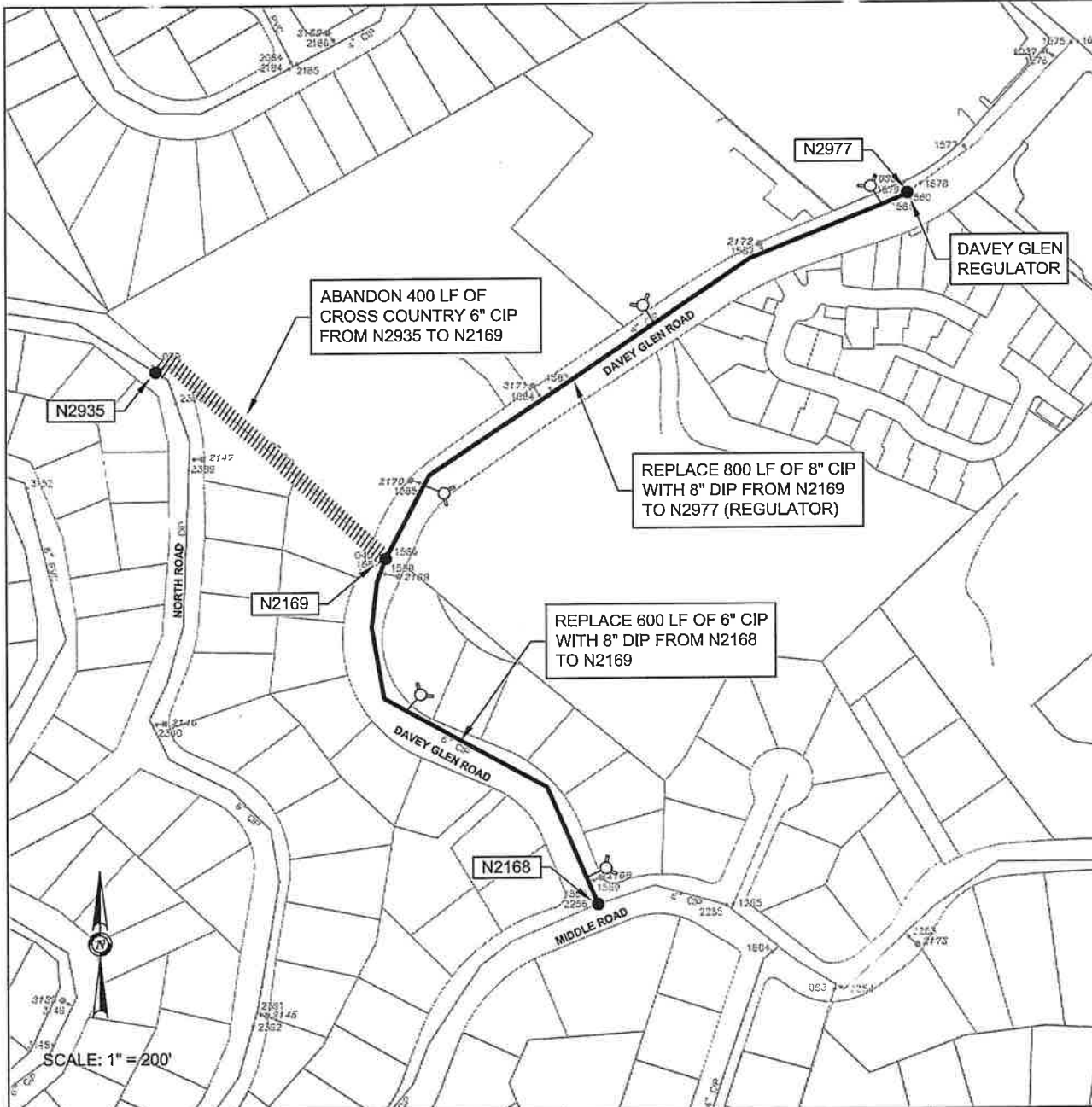
Abandon 400 LF of 6" CC CIP
 Replace 1,400 LF of 6" & 8" CIP w/ 8" DIP
 Replace 5 fire hydrant assemblies
 Replace 17 service connections

PROJECT BENEFITS

The North Road Cross Country / Davey Glen Road Improvements abandons a CC water main, reduces District maintenance, and replaces an aging water main along Davey Glen Road.

PROJECT BUDGET

Pipe Abandonment @ \$10,000/End	\$ 20,000
1,400 LF - 8" DIP @ \$250/LF	\$ 350,000
5 Fire Hydrants @ \$15,000/EA	\$ 75,000
17 Service Connections @ \$3,000/EA	\$ 51,000
Subtotal Construction	\$ 496,000
Planning, Design & Construction Support	\$ 124,000
Contingency (±10%)	\$ 60,000
Project Budget	\$ 680,000



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 Pleasanton, CA 94588
 925.224.7717 Fax 925.224.7726
 www.pcgengr.com

JOB No.	10012.07
DATE	5/20/16
SCALE	AS NOTED
DRAWN:	BY <u>BL</u> CKD <u>JP</u>



MID-PENINSULA WATER DISTRICT
 SAN MATEO COUNTY, CALIFORNIA
 3 DAIRY LANE
 BELMONT, CA 94002

**CAPITAL IMPROVEMENT PROGRAM
 NORTH ROAD CROSS COUNTRY / DAVEY GLEN ROAD
 IMPROVEMENTS PROJECT 15-43**

ACADEMY AVENUE / BELBURN DRIVE IMPROVEMENTS

PROJECT BACKGROUND

Academy Avenue between Ralston Avenue and Belburn Drive has two parallel water mains: a 600 LF 4" polyvinylchloride (PVC) water main installed in the 1970 and a 6" cast iron (CIP) water main installed in 1977. Hydraulic analysis indicates the existing 4" PVC provides little hydraulic benefit to the system. It is assumed the existing services are located on the 4" PVC. In addition, Belburn Drive between Academy Avenue and Villa Avenue also has a 300 LF 4" PVC water main incapable of achieving the minimum recommended fire flow of 1,500 gpm at 20 psi with fire flows at 1,080 gpm. The two 4" PVC water mains aforementioned connect to each other at Academy Avenue. This project abandons the existing 4" PVC on Academy Avenue, relocates 22 service connections to the existing 6" CIP, and replaces 150 LF of PVC on Belburn Drive with 8" ductile iron pipe (DIP) connecting it to the existing 6" CIP on Academy Avenue. Hydraulic analysis indicates a 132% increase in fire flows on Belburn Drive to 2,500 gpm. Distribution System Analysis Nos. 057 and 058

PROPOSED IMPROVEMENTS

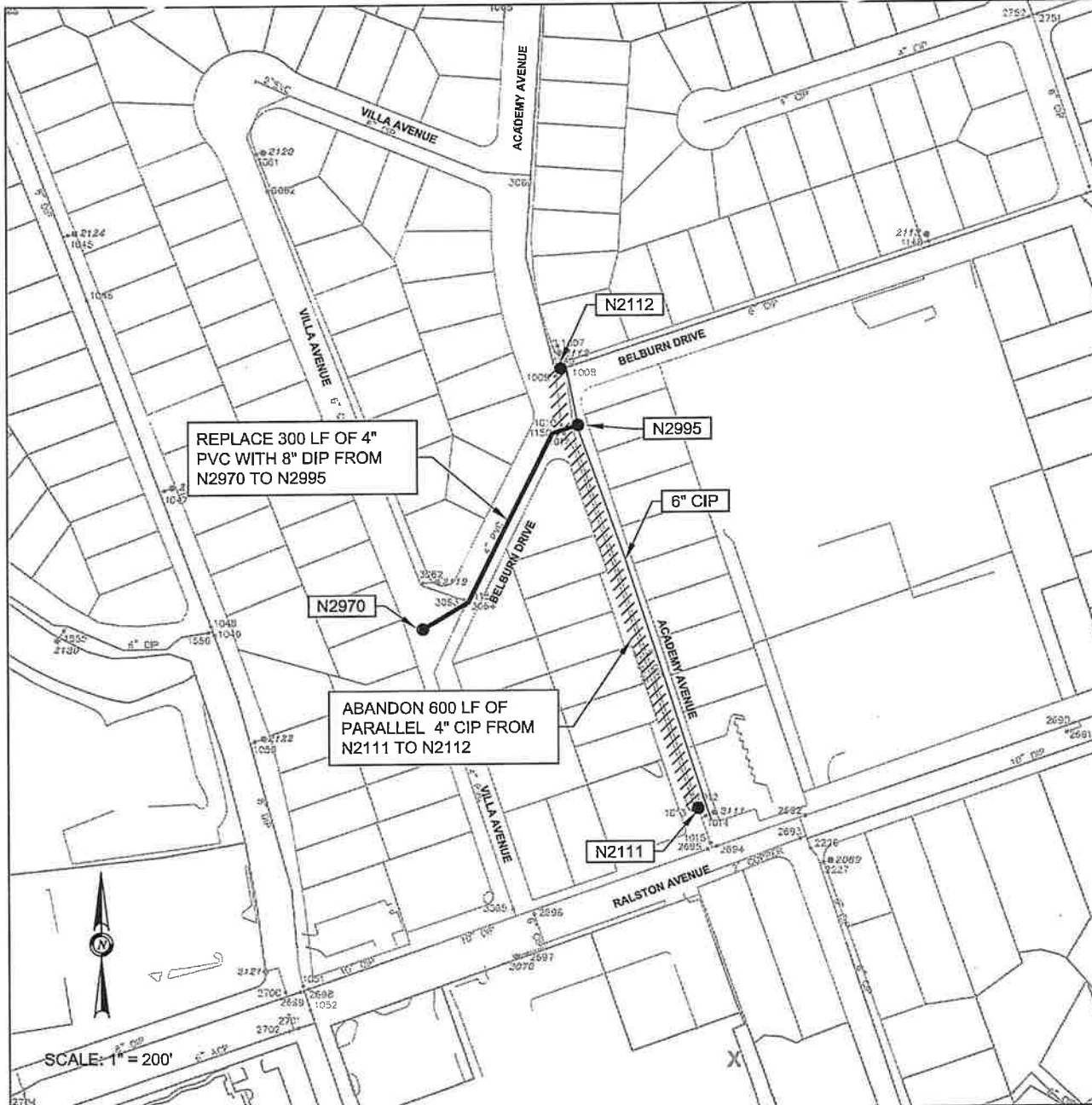
Abandon 600 LF of 4" PVC
 Replace 300 LF of 4" PVC with 8" DIP
 Replace 25 service connections (22 on Academy, 3 on Belburn)

PROJECT BENEFITS

The Academy Avenue / Belburn Drive Improvements abandons a 4" PVC water main providing little benefit to the system, replaces old and aging 4" PVC with new 8" DIP, reduces District maintenance, and improves fire flows in the area as much as 132%.

PROJECT BUDGET

1 Reconnection @ \$20,000/EA	\$ 20,000
2 Pipe End Abandonments @ \$10,000/EA	\$ 20,000
300 LF - 8" DIP @ \$250/LF	\$ 75,000
25 Service Connections @ \$3,000/EA	\$ 75,000
Subtotal Construction	\$ 190,000
Planning, Design & Construction Support	\$ 57,000
Contingency (±10%)	\$ 23,000
Project Budget	\$ 270,000



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JOB No. 10012.07
 DATE 5/20/16
 SCALE AS NOTED
 DRAWN: BY BL
 CKD JP



MID-PENINSULA WATER DISTRICT
 SAN MATEO COUNTY, CALIFORNIA
 3 DAIRY LANE
 BELMONT, CA 94002

CAPITAL IMPROVEMENT PROGRAM
ACADEMY AVENUE / BELBURN DRIVE IMPROVEMENTS
PROJECT 15-53

FRANCIS AVENUE / COURT IMPROVEMENTS

PROJECT BACKGROUND

Francis Avenue is located between Fairway Drive and Notre Dame Avenue and has a 640 LF 4" polyvinylchloride (PVC) water main installed in 1975. Francis Court is located directly off Francis Avenue and also has 190 LF of 4" PVC installed in 1976. Fire flows along these streets are well below the recommended 1,500 gpm at 20 psi with flows as low as 925 gpm and 590 gpm on Francis Avenue and Francis Court respectively. In addition, no hydrant currently exists at the end of Francis Court. This project replaces a total 830 LF of 4" PVC with 8" ductile iron pipe (DIP) and adds an additional hydrant in the area. Hydraulic analysis indicates fire flow increases as much as 300% to over 2,350 gpm upon completion of this project. Distribution System Analysis No. 055

PROPOSED IMPROVEMENTS

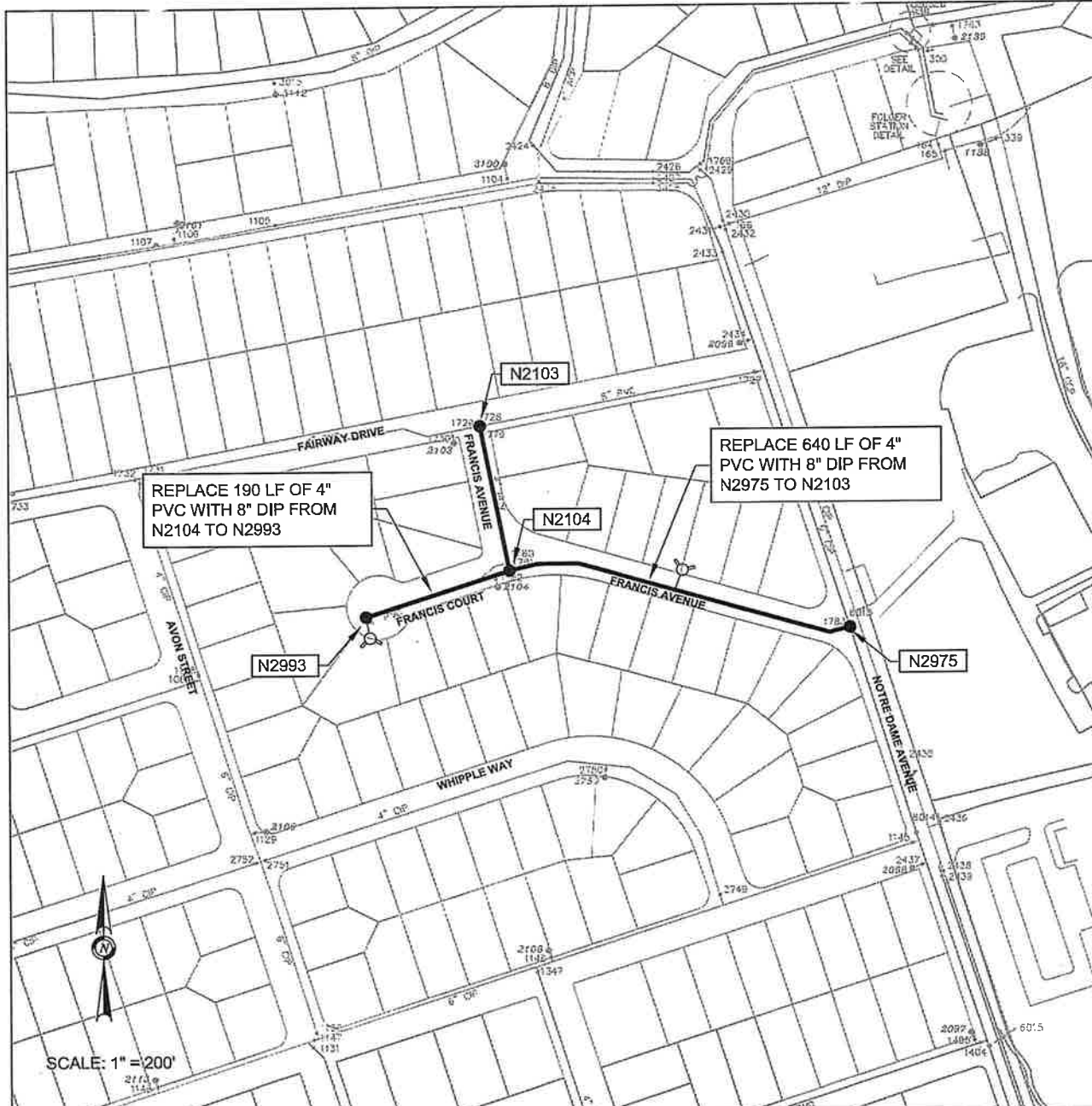
- Replace 830 LF of 4" PVC with 8" DIP
- Install 1 new fire hydrant assembly
- Replace 1 fire hydrant assembly
- Replace 23 service connections

PROJECT BENEFITS

The Francis Avenue/Court Improvements replaces undersized 4" PVC water main with 8" DIP, improves fire protection with the addition of a hydrant, and improves fire flows in the area as much as 300%.

PROJECT BUDGET

830 LF - 8" DIP @ \$250/LF	\$ 207,500
2 Fire Hydrants @ \$15,000/EA	\$ 30,000
23 Service Connections @ \$3,000/EA	\$ 69,000
Subtotal Construction	\$ 306,500
Planning, Design & Construction Support	\$ 78,000
Contingency (±10%)	\$ 40,500
Project Budget	\$ 425,000



SCALE: 1" = 200'



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JOB No.	10012.07
DATE	5/20/16
SCALE	AS NOTED
DRAWN:	BY: BL CKD: JP



MID-PENINSULA WATER DISTRICT
SAN MATEO COUNTY, CALIFORNIA
3 DAIRY LANE
BELMONT, CA 94002

**CAPITAL IMPROVEMENT PROGRAM
FRANCIS AVENUE / COURT IMPROVEMENTS
PROJECT 15-51**

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS

**2017 SEWER REHABILITATION PROJECT
CITY OF BELMONT**

ENGINEER'S ESTIMATE OF PROBABLE CONSTRUCTION COST - 95% DESIGN

October 6, 2017

Item No.	Item Description	Unit of Measure	Estimated Quantity	Item Unit Price	Bid Item Extension
1	Mobilization/Demobilization	LS	1	\$180,000	\$180,000
2	Pedestrian and Traffic Control	LS	1	\$50,000	\$50,000
3	SWPP Plan	LS	1	\$7,000	\$7,000
4	Shoring for Sewer Facilities	LS	1	\$45,000	\$45,000
5	Shoring for Water Facilities	LS	1	\$5,000	\$5,000
DAVEY GLEN - SEWER					
6	Pipe Bursting In Davey Glen	LF	1124	\$210	\$236,040
7	Pipe Bursting In Easement	LF	91	\$220	\$20,020
8	Lateral Reconnection	EA	6	\$1,500	\$9,000
9	Lateral Extension 1235 North Rd	LS	1	\$6,000	\$6,000
10	New Manhole in Easement	EA	1	\$8,000	\$8,000
FRANCIS - SEWER					
11	New 8-inch PVC, Open Trench	LF	792	\$285	\$225,720
12	New Manhole	EA	4	\$7,000	\$28,000
13	Lateral Extension	EA	6	\$3,800	\$22,800
14	Abandon Existing Sewer Main	LF	409	\$20	\$8,180
BELBURN/ACADEMY/VILLA - SEWER					
15	New 8-inch, Open Trench	LF	714	\$290	\$207,060
16	New Manhole	EA	3	\$7,000	\$21,000
17	Lateral Extension	EA	8	\$2,000	\$16,000
18	Abandon Existing Sewer Main	LF	543	\$15	\$8,145
19	Abandon Manhole	EA	1	\$2,500	\$2,500
20	Pipe Burst in Easement	LF	317	\$220	\$69,740
21	Lateral Reconnection	EA	7	\$1,500	\$10,500
22	Manhole Extension	EA	2	\$1,500	\$3,000
DAVEY GLEN - WATER					
23	New 8-inch DIP	LF	1443	\$320	\$461,760
24	Abandon Existing Water Mains	LS	1	\$16,000	\$16,000
25	North Road Modifications	LS	1	\$5,000	\$5,000
26	1-inch Water Service (Type A)	EA	15	\$3,500	\$52,500
27	4-inch Water Service (Type B)	EA	2	\$9,000	\$18,000
28	8-inch Water Connection (Type C)	EA	2	\$5,000	\$10,000
29	1-inch Water Service (Type D)	EA	1	\$1,000	\$1,000
30	Fire Hydrant Replacement (Type E)	EA	5	\$16,000	\$80,000
31	4-inch Connection (Type F)	EA	2	\$6,000	\$12,000
32	6-inch Gate Valve	EA	2	\$2,500	\$5,000
33	8-inch Gate Valve	EA	4	\$3,000	\$12,000
34	Connection at Middle Rd	LS	1	\$8,500	\$8,500
FRANCIS - WATER					
35	New 8-inch DIP	LF	801	\$320	\$256,320
36	Abandon Existing Water Mains	LS	1	\$10,000	\$10,000
37	Fire Hydrant Replacement (Type E)	EA	1	\$8,000	\$8,000
38	1-inch Water Service (Type A)	EA	23	\$3,500	\$80,500
39	4-inch Blow Off Assembly	EA	1	\$6,000	\$6,000
40	Connection at Notre Dame Ave	LS	1	\$12,000	\$12,000
41	Connection at Fairway Dr	LS	1	\$4,000	\$4,000
42	6-inch Gate Valve	EA	2	\$2,500	\$5,000
43	8-inch Gate Valve	EA	4	\$3,000	\$12,000
BELBURN/ACADEMY - WATER					
44	New 8-inch DIP	LF	274	\$320	\$87,680
45	Abandon Existing Water Mains	LS	1	\$8,000	\$8,000
46	1-inch Water Service (Type A)	EA	24	\$3,500	\$84,000
47	Academy Cross Connection Abandonment	LS	1	\$5,000	\$5,000
48	Connections at Belburn and Academy	LS	1	\$40,000	\$40,000
49	Connection at Belburn and Villa	LS	1	\$3,500	\$3,500
50	8-inch Gate Valve	EA	4	\$3,000	\$12,000
Water only Sub Total					\$1,321,000
Sewer only Sub Total					\$944,000
Shared Costs Sub Total					\$237,000
10% Contingency					\$250,000
Total					\$2,752,000

This estimate of construction cost is a professional opinion, based upon the engineer's experience with the design and construction of similar projects. It is prepared only as a guide and is subject to change. Schaaf & Wheeler and its subconsultants make no warranty, whether expressed or implied, that the actual costs will not vary from these estimated costs, and assumes no liability for such variances. This estimate specifically excludes any costs associated with designing for handling and disposal of hazardous wastes and contaminated materials. Costs associated with land, right-of-way, or easement purchase are not included in this estimate.



AGENDA ITEM NO. 8.A.

DATE: November 15, 2017
TO: Board of Directors
FROM: Tammy Rudock, General Manager

SUBJECT: RECEIVE REPORT ON 2017 MPWD CLASSIFICATION STUDY BY KOFF & ASSOCIATES, AND CONSIDER RESOLUTION 2017-20 APPROVING MPWD EMPLOYEE CLASSIFICATION DESCRIPTIONS DATED NOVEMBER 2017

RECOMMENDATION

Receive report on 2017 MPWD Classification Study by KOFF & Associates, and adopt Resolution 2017-20 approving MPWD Employee Classification descriptions dated November 2017.

FISCAL IMPACT

KOFF & Associates professional services for the Classification Study: Not to exceed \$9,000.

BACKGROUND

MPWD employee classifications and position descriptions were last revised in July 2007. Since that time the MPWD has reorganized a few times, and positions were modified or reclassified, and formal employee classifications and descriptions were never created. The Classification Study was long over-due and fulfills a commitment made in 2014 to the MPWD Employees Association to complete this task.

DISCUSSION

Each MPWD employee was involved in this year-long classification study and position description development project and their input and understanding was important. Three (3) employees were recommended for reclassification as a result of the study, namely, the Field Operations Supervisor to Operations Supervisor. Also, one new position description was created, namely, the Accountant, for future organizational consideration.

The project was led by Alyssa Thompson, from KOFF & Associates, and she will present an overview of the attached 2017 MPWD Classification Study and new Employee Classification descriptions at the Board meeting.

Attachments: Resolution 2017-20
KOFF & Associates 2017 MPWD CLASSIFICATION STUDY

BOARD ACTION: APPROVED:____ DENIED:____ POSTPONED:____ STAFF DIRECTION:____

UNANIMOUS____ STUEBING____ WARDEN____ VELLA____ LINVILL____ ZUCCA____

RESOLUTION NO. 2017-20

**APPROVING THE EMPLOYEE CLASSIFICATION DESCRIPTIONS
DATED NOVEMBER 2017**

* * *

MID-PENINSULA WATER DISTRICT

WHEREAS, the Mid-Peninsula Water District ("MPWD") initiated a formal Classification Study in August 2016; and

WHEREAS, KOFF & Associated facilitated and led the Classification Study, involving all eighteen (18) MPWD employees during the process, which was completed in November 2017; and

WHEREAS, the following ten (10) employee classifications were developed over the course of the one-year project:

- General Manager;
- Operations Manager;
- Administrative Services Manager;
- Operations Supervisor;
- Lead Operator;
- Water System Operator;
- Maintenance Technician;
- Administrative Specialist;
- Accountant; and
- Administrative Assistant; and

WHEREAS, three (3) employees will be reclassified after approval of the new classification descriptions, namely, the Field Operations Supervisors to Operations Supervisors; and

WHEREAS, one (1) new employee classification was created, namely, the Accountant position, for future organizational consideration.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Mid-Peninsula Water District hereby approves the ten (10) Employee Classification Descriptions dated November 2017.

REGULARLY PASSED AND ADOPTED this 15th day of November 2017, by the following vote:

AYES:

NOES:

ABSTENTIONS:

ABSENCES:

President, Board of Directors
Mid-Peninsula Water District

ATTEST:

District Secretary



November 2017

Classification Study Final Report

Mid-Peninsula Water District

KOFF & ASSOCIATES

ALYSSA THOMPSON

Senior Project Manager

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Fax: 510.652.5633

November 3, 2017

Tammy Rudock
General Manager
Mid-Peninsula Water District
3 Dairy Lane
Belmont, CA 94002

Dear Ms. Rudock:

Koff & Associates is pleased to present the classification study final report for the study of all positions in the Mid-Peninsula Water District (District). This report documents the classification study process and provides recommendations for the classification plan, allocation of all District positions, and class specifications.

We would like to thank you for your assistance and cooperation without which this study could not have been brought to its successful completion.

We will be glad to answer any questions or clarify any points as you are implementing the findings and recommendations. It was a pleasure working with you and we look forward to future opportunities to provide you with professional assistance.

Very truly yours,



Alyssa Thompson
Senior Project Manager



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- Appendix I: New Classification Descriptions
- Appendix II: Recommended Position Allocations



EXECUTIVE SUMMARY

Background

In February 2017, the Mid-Peninsula Water District (District) contracted with Koff & Associates (K&A) to conduct a classification study for all of the District’s classifications. All classification findings, recommendations, and options for implementations are in this report.

This classification review process was precipitated by:

- The concern of the Board of Directors and management that employees should be recognized for the level and scope of work performed that allows the District to recruit and retain a high-quality staff;
- To ensure that classification descriptions reflect current operations, responsibilities, duties, qualifications, regulatory requirements, and technology;
- To reflect past and allow for future organizational changes; and
- The desire to ensure that the District has adequate career paths and a classification system that fosters career growth and service within the organization.

Summary of Findings

When positions are classified, the focus is on assigned job duties and the job-related requirements for successful performance, not on individual employee capabilities or amount of work performed. Positions are thus evaluated and classified on the basis of such factors as knowledge and skill required to perform the work, the complexity of the work, the authority delegated to make decisions and take action, the responsibility for the work of others and/or for budget expenditures, contacts with others (both inside and outside of the organization), and the impact of the position on the organization and working conditions.

All class descriptions were updated in order to ensure that the format is consistent, and that the duties and responsibilities are current and properly reflect the required qualifications. Additionally, the factors outlined above were analyzed to determine the allocation of all studied District positions.

The following table shows a summary of the recommendations for each classification (please note that no change means no change in title or reclassification; however, as noted above, all classification descriptions were updated).

Table 1. Summary of Classification Recommendations

Classification Title	Proposed Title	Recommendation
Administrative Assistant	Administrative Assistant	No Change
Administrative Services Manager	Administrative Services Manager	No Change
Administrative Specialist	Administrative Specialist	No Change



Classification Title	Proposed Title	Recommendation
Field Operations Supervisor	Operations Supervisor	Title Change
General Manager	General Manager	No Change
Lead Operator	Lead Operator	No Change
Maintenance Technician	Maintenance Technician	No Change
Operations Manager	Operations Manager	No Change
Water System Operator	Water System Operator	No Change
N/A	Accountant	New Classification

CLASSIFICATION STUDY GOALS

The goals and objectives of the classification portion of the study were to:

- Recognize the scope and level of responsibility of various positions including designing classifications with clearly defined differences and establishing and consistently applying standards for specification language;
- Develop recommendations that would be perceived as equitable by management and employees alike by maintaining regular and clear communication with employees and management, making classification decisions based on work performed (rather than individual competencies and experience), avoiding using classifications to resolve compensation issues and to reward performance, and documenting processes and procedures as appropriate;
- Provide for growth and flexibility of assignment, where feasible, in recognition that some job duties and responsibilities may evolve over time;
- Provide adequate career paths that will foster career service within the District;
- Develop classification descriptions that clearly state minimum requirements (i.e. knowledge, skills, abilities, education, experience, certifications, and licenses) of each classification that are consistent with experience and training that is clearly obtainable by positions immediately below on the career ladder and clarify opportunities for promotion and/or cross training;
- Provide a classification structure that ensures regulatory compliance, including allocation of each position to the correct classification with appropriate Fair Labor Standards Act (FLSA) designation, as well as, meeting Federal Americans with Disabilities Act (ADA) regulations; and



- Develop a Classification Plan that documents the classification study methodology, findings and recommendations and serves as a guide for the District to maintain the Plan in the future.

CLASSIFICATION STUDY PROCESS

The classification study procedures were as follows:

- An initial meeting was held with District management to clarify study scope, objectives, processes, and deliverables.
- Orientation meetings were held to which all employees were invited, to meet consultant staff involved with the project, clarify study objectives and procedures, answer questions, and distribute the Position Description Questionnaire (PDQ) forms.
- After the PDQs were completed by employees and reviewed by management and consultant staff, interviews were conducted with all employees and management.
- Following the analysis of the classification information gathered, draft class concepts, specifications, and position allocations were developed for management and employee review.
- After resolution of issues, wherever possible, including additional contacts with employees and management to gain details and clarification, appropriate modifications were made to the draft specifications and allocations and this final report was prepared.

CLASSIFICATION CONCEPTS

Positions vs. Classifications

“Position” and “Classification” are two terms that are often used interchangeably, but have very different meanings. As used in this report:

- A position is an assigned group of duties and responsibilities performed by one person. A position can be full-time, part-time, regular or temporary, filled or vacant. Often the word “job” is used in place of the word “position.”
- A classification or class may contain only one position or may consist of a number of positions. When you have several positions assigned to one class, it means that the same title is appropriate for each position; that the scope, level, duties, and responsibilities of each position assigned to the class are sufficiently similar (but not identical) that the same core knowledge, skills, abilities, and other requirements are appropriate for all positions, and that the same salary range is equitable for all positions in the class.

The description of a position often appears as a working desk manual, going into detail regarding work process steps, while a class description emphasizes the general scope and level of



responsibilities, plus the knowledge, skills, abilities, and other requirements for successful performance.

The Relationship Between Classification and Compensation

Classification and the description of the work and the requirements to perform the work are separate and distinct from determining the worth of that work in the labor market and to the organization. While recommending the appropriate compensation for the work of a class depends upon an understanding of what that work is and what it requires (as noted above), compensation levels are often influenced by two factors:

- The external labor market; and
- Internal relationships within the organization.

The Purpose of Having a Classification Plan

A classification plan provides an appropriate basis for making a variety of human resources decisions such as the:

- Development of job-related recruitment and selection procedures;
- Clear and objective appraisal of employee performance;
- Development of training plans and succession planning;
- Design of an equitable and competitive salary structure;
- Organizational development and the management of change; and
- Provision of an equitable basis for discipline and other employee actions.

In addition to providing this basis for various human resources management and process decisions, a classification plan can also effectively support systems of administrative and fiscal control. Grouping of positions into an orderly classification system supports planning, budget analysis and preparation, and various other administrative functions.

Within a classification plan, classifications can either be broad (containing a number of positions) or narrow (emphasizing individual job characteristics). Broad job classifications are indicated when:

- Employees can be hired with a broad spectrum of knowledge, skill, and/or academic preparation and can readily learn the details of the District, the department, and the position on-the-job; or
- There is a need for flexibility of the assignment within a an organization due to changing programs, technologies, or workload.

Individualized job classifications are indicated when:

- There is an immediate need to recruit for specialty knowledge and skills;
- There is a minimum of time or capability for on-the-job training; or



- There is an organizational need to provide for specific job recognition and to highlight the differences between jobs.

Most classification plans are a combination of these two sets of factors and we have chosen the middle ground in this study as being most practicable in the District’s changing environment and service delivery expectations.

Classification Descriptions

In developing the new and revised classification descriptions for all positions, the basic concepts outlined in the previous pages were utilized. The recommended class descriptions are included in Appendix I of this report.

As mentioned earlier, the class descriptions are based upon the information from the written PDQs completed by each employee, interviews, and from information provided by employees and managers during the review process. These descriptions provide:

- A written summary documenting the work performed and/or proposed by the incumbents of these classifications;
- Distinctions among the classes; and
- Documentation of requirements and qualifications to assist in the recruitment and selection process.

Just as there is a difference between a position and a class, there is also a difference between a position description and a class description. A position description, often known as a “desk manual”, generally lists each duty an employee performs and may also have information about how to perform that duty. A class description normally reflects several positions and is a summary document that does not list each duty performed by every employee. The class description, which is intended to be broader, more general and informational, is intended to indicate the general scope and level of responsibility and requirements of the class, not detail-specific position responsibilities.

The sections of each class description are as follows:

Title: This should be brief and descriptive of the class and consistent with other titles in the classification plan and the occupational area.

- The title of a classification is normally used for organization, classification, and compensation purposes within the District. Often working titles are used within a department to differentiate an individual. All positions have a similar level of scope and responsibility; however, the working titles may give assurance to a member of the public that they are dealing with an appropriate individual. Working titles should be authorized by the General Manager to ensure consistency within the District and across departmental lines.

Definition: This provides a capsule description of the job and should give an indication of the type of supervision received, the scope and level of the work and any unusual or unique factors. The



phrase “performs related work as required” is not meant to unfairly expand the scope of the work performed, but to acknowledge that jobs change and that not all duties are included in the class specification.

Supervision Received and Exercised: This section specifies which class or classes provide supervision to the class being described and the type and level of work direction or supervision provided to this class. The section also specifies what type and level of work direction or supervision the class provides to other classes. This assists the reader in defining where the class “fits” in the organization and alludes to possible career advancement opportunities.

Class Characteristics: This can be considered the “editorial” section of the specification, slightly expanding the Definition, clarifying the most important aspects of the class and distinguishing this class from the next higher-level in a class series or from a similar class in a different occupational series.

Examples of Typical Job Functions: This section provides a list of the major and typical duties, intended to define the scope and level of the class and to support the Qualifications, including Knowledge and Skills. This list is meant to be illustrative only. It should be emphasized that the description is a summary document, and that duties change depending upon program requirements, technology, and organizational needs.

Qualifications: This element of the description has several sections:

- A listing of the job-related knowledge and skills required to successfully perform the work. They must be related to the duties and responsibilities of the work and capable of being validated under the Equal Employment Opportunity Commission’s Uniform Guidelines on Selection Procedures. Knowledge (intellectual comprehension) and Abilities (acquired proficiency) should be sufficiently detailed to provide the basis for selection of qualified employees.
- A listing of educational and experience requirements that outline minimum and alternative ways of gaining the knowledge and abilities required for entrance into the selection process. These elements are used as the basic screening technique for job applicants.
- Licenses and/or certifications identify those specifically required in order to perform the work. These certifications are often required by an agency higher than the District (i.e., the State), and can therefore be appropriately included as requirements.

Physical Demands: This section identifies the basic physical abilities required for performance of the work. These are not presented in great detail (although they are more specifically covered for documentation purposes in the PDQs) but are designed to indicate the type of pre-employment physical examination (lifting requirements and other unusual characteristics are included, such as “strength, stamina, and mobility to perform medium to heavy physical work, to work in confined spaces and around machines, to climb and descend ladders, to operate varied hand and power tools and construction equipment”) and to provide an initial basis for determining reasonable accommodation for ADA purposes.



Working Conditions: These can describe certain outside influences and circumstances under which a job is performed; they give employees or job applicants an idea of certain risks involved in the job and what type of protective gear may be necessary to perform the job. Examples are cold and hot temperatures, inclement weather conditions, road hazards, loud noise levels, vibration, confining workspaces, chemicals, mechanical and/or electrical hazards, and hazardous physical substances, fumes, and other job conditions.

Fair Labor Standards Act

One of the major components of the job analysis and classification review is the determination of each classification’s appropriate Fair Labor Standards Act (FLSA) status, i.e., exempt vs. non-exempt from the FLSA overtime rules and regulations.

As we review position description questionnaires and notes from the interviews, we analyze each classification’s essential functions to determine FLSA status. There are three levels for the determination of the appropriate FLSA status that are utilized and on which we base our recommendations. Below are the steps used for the determination of Exempt FLSA status.

Salary Basis Test: The incumbents in a classification are paid at least \$455 per week (\$23,660 per year), not subject to reduction due to variations in quantity/quality of work performed. Note: computer professionals’ salary minimum is defined in hourly terms as \$27.63 per hour.

Exemption Applicability: The incumbents in a classification perform any of the following types of jobs:

- Executive: Employee whose primary duty is to manage the business or a recognized department/entity and who customarily directs the work of two or more employees. This also includes individuals who hire, fire, or make recommendations that carry particular weight regarding employment status. Examples: general manager, manager, supervisor.
- Administrative: Employee whose primary activities are performing office work or non-manual work on matters of significance relating to the management or business operations of the firm or its customers and which require the exercise of discretion and independent judgment. Examples: coordinator, administrator, analyst.
- Professional: Employee who primarily performs work requiring advanced knowledge/education and which includes consistent exercise of discretion and independent judgment. The advanced knowledge must be in a field of science or learning acquired in a prolonged course of specialized intellectual instruction. Examples: attorney, architect, biologist, engineer.
- Computer professional: Employee who primarily performs work as a computer systems analyst, programmer, software engineer or similarly skilled work in the computer field performing a) application of systems analysis techniques and procedures, including consulting with users to determine hardware, software, or system functional specifications; b) design, development, documentation, analysis, creation, testing, or modification of computer systems or programs, including prototypes, based on and



related to user or system design specification; or c) design, documentation, testing, creation or modification of computer programs based on and related to user or system design specifications; or a combination of the duties described above, the performance of which requires the same level of skills. Examples: system analyst, database analyst, network architect, software engineer, programmer.

Job Analysis: A thorough job analysis of the job duties must be performed to determine exempt status. An exempt position must pass both the salary basis and duties tests. The job analysis should include:

- Review of the minimum qualifications established for the job;
- Review of prior class descriptions, questionnaires, and related documentation;
- Confirmation of duty accuracy with management; and
- Review and analysis of workflow, organizational relationships, policies, and other available organizational data.

Non-exempt classifications work within detailed and well-defined sets of rules and regulations, policies, procedures, and practices that must be followed when making decisions. Although the knowledge base required to perform the work may be significant, the framework within which incumbents' work is fairly restrictive and finite. (Please note that FLSA does not allow for the consideration of workload and scheduling when it comes to exemption status).

Finally, often times a classification performs both non-exempt and exempt duties, so we analyze time spent on each type of duties. If a classification performs mostly non-exempt duties (i.e. more than 50% of his or her time), then the classification would be considered non-exempt.

CLASSIFICATION FINDINGS AND RECOMMENDATIONS

Classification Structure and Allocation Factors

The proposed classification plan provides the District with a systematic classification structure based on the interrelationship between duties performed, the nature and level of responsibilities, and other work-related requirements of the jobs.

A classification plan is not a stable, unchanging entity. Classification plans may be updated and revised by conducting classification studies that are organizational wide (review of the all classifications and positions) or position-specific. The methodology used for both types of studies is the same, as outlined above.

For either type of study, when identifying appropriate placement of new and/or realigned positions within the classification structure, there are general allocation factors to consider. By analyzing these factors, the District will be able to change and grow the organization while maintaining the classification plan.



1. Type and Level of Knowledge and Skill Required

This factor defines the level of job knowledge and skill, including those attained by formal education, technical training, on-the job experience, and required certification or professional registration. The varying levels are as follows:

A. The entry-level into any occupational field

This entry-level knowledge may be attained by obtaining a high school diploma, completing specific technical course work, or obtaining a four-year or advanced college or university degree. Little to no experience is required.

B. The experienced or journey-level (fully competent-level) in any occupational field

This knowledge and skill level recognizes a class that is expected to perform the day-to-day functions of the work independently, but with guidelines (written or oral) and supervisory assistance available. This level of knowledge is sufficient to provide on-the-job instruction to a fellow employee or an assistant when functioning in a lead capacity. Certifications may be required for demonstrating possession of the required knowledge and skills.

C. The advanced level in any occupational field

This knowledge and skill level is applied in situations where an employee is required to perform or deal with virtually any job situation that may be encountered. Guidelines may be limited and creative problem solving may be involved. Supervisory knowledge and skills are considered in a separate factor and should not influence any assessment of this factor.

2. Supervisory/Management Responsibility

This factor defines the staff and/or program management responsibility, including short and long-range planning, budget development and administration, resource allocation, policy and procedure development, and supervision and direction of staff.

A. No ongoing direction of staff

The employee is responsible for the performance of his or her own work and may provide side-by-side instruction to a co-worker.

B. Lead direction of staff or program coordination

The employee plans, assigns, directs, and reviews the work of staff performing similar work to that performed by the employee on a day-to-day basis. Training in work procedures is normally involved. If staff direction is not involved, the employee must have responsibility for independently coordinating one or more programs or projects on a regular basis.



C. Full first-line supervisor

The employee performs the supervisory duties listed above, and, in addition, makes effective recommendation and/or carries out selection, performance evaluation, and disciplinary procedures. If staff supervision is not involved, the employee must have programmatic responsibility, including development and implementing goals, objectives, policies and procedures, and budget development and administration.

D. Manager

The employee is considered management, often supervising through subordinate levels of supervision. In addition to the responsibilities outlined above, responsibilities include allocating staff and budget resources among competing demands and performing significant program and service delivery planning and evaluation. This level normally reports to the General Manager.

E. Executive Management

The employee has total administrative responsibility for the District and reports to the Board of Directors.

3. Supervision Received

A. Direct Supervision

Direct supervision is usually received by entry-level employees and trainees, i.e., employees who are new to the organization and/or position they are filling. Initially under close supervision, incumbents learn to apply concepts and work procedures and methods in assigned area of responsibility to resolve problems of moderate scope and complexity. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise. As experience is gained, assignments become more varied and are performed with greater independence.

B. General Supervision

General supervision is usually received by the experienced and journey-level employees, i.e., employees who have been in a position for a period of time and have had the opportunity to be trained and learn most, if not all, duties and responsibilities of the assigned classification. Incumbents are cross-trained to perform the full range of technical work in all of the areas of assignment.

At the experienced-level, positions exercise some independent discretion and judgment in selecting and applying work procedures and methods. Assignments and objectives are set for the employee and established work methods are followed. Incumbents have some flexibility in the selection of steps and timing of work processes.

Journey-level positions receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of assigned



projects, programs, and team(s). Assignments are given with general guidelines and incumbents are responsible for establishing objectives, timelines, and methods to deliver work products. Work is typically reviewed upon completion for soundness, appropriateness, and conformity to policy and requirements, and the methodology used in arriving at the end results are not reviewed in detail.

C. General Direction

General direction is usually received by senior level or management positions. Work assignments are typically given as broad, conceptual ideas and directives and incumbents are accountable for overall results and responsible for developing guidelines, action plans, and methods to produce deliverables on time and within budget.

D. Administrative and Policy Direction

Administrative direction is usually received by executive management classifications. The incumbent is accountable for accomplishing District-wide planning and operational goals and objectives within legal and general policy and regulatory guidelines. The incumbent is responsible for the efficient and economical performance of the organization's operations.

4. Problem Solving

This factor involves analyzing, evaluating, reasoning, and creative thinking requirements. In a work environment, not only the breadth and variety of problems are considered, but also guidelines, such as supervision, policies, procedures, laws, regulations, and standards available to the employee.

A. Structured problem solving

Employees learn to apply concepts and work procedures and methods in assigned area of responsibility and to resolve problems and issues that are specific, less complex, and/or repetitive. Exceptions or changes in procedures are explained in detail as they arise.

B. Independent, guided problem solving

Work situations require making independent decisions among a variety of alternatives; however, policies, procedures, standards, and regulations and/or management are available to guide the employee towards problem resolution.

C. Application of discriminating choices

Work situations require independent judgment and decision-making authority when identifying, evaluating, adapting, and applying appropriate concepts, guidelines, references, laws, regulations, policies, and procedures to resolve diverse and complex problems and issues.



D. Creative, evaluative, or critical thinking

The work involves a high-level of problem-solving requiring analysis of unique issues or increasingly complex problems without precedent and/or structure and formulating, presenting, and implementing strategies and recommendations for resolution.

5. Authority for Making Decisions and Taking Action

This factor describes the degree to which employees have the freedom to take action within their job. The variety and frequency of action and decisions, the availability of policies, procedures, laws, and supervisory or managerial guidance, and the consequence or impact of such decisions are considered within this factor.

A. Direct, limited work responsibility

The employee is responsible for the successful performance of his or her own work with little latitude for discretion or decision-making. Work is usually supervised while in progress and fits an established structure or pattern. Direct supervision is readily available.

B. Decision-making within guidelines

The employee is responsible for the successful performance of their own work, but able to prioritize and determine methods of work performance within general guidelines. Supervision is available, although the employee is expected to perform independently on a day-to-day basis. Emergency or unusual situations may occur, but are handled within procedures and rules. Impact of decisions is normally limited to the work unit, project, or program to which assigned.

C. Independent action with focus on work achieved

The employee receives assignments in terms of long-term objectives, rather than day-to-day or weekly timeframes. Broad policies and procedures are provided, but the employee has latitude for choosing techniques and deploying staff and material resources. Impact of decisions may have significant program or District-wide service delivery and/or budgetary impact.

D. Decisions made within general policy or elected official guidance

The employee is subject only to the policy guidance of elected officials and/or broad regulatory or legal constraints. The ultimate authority for achieving the goals and objectives of the District are with this employee.

6. Interaction with Others

This factor includes the nature and purpose of contacts with others, from simple exchanges of factual information to the negotiation of difficult issues. It also considers with whom the contacts are made, from co-workers and the public to elected or appointed public officials.



A. Exchange of factual information

The employee is expected to use ordinary business courtesy to exchange factual information with co-workers and the public. Strained situations may occasionally occur, but the responsibilities are normally not confrontational.

B. Interpretation and explanation of policies and procedures

The employee is required to interpret policies and procedures, apply and explain them, and influence the public or others to abide by them. Problems may need to be defined and clarified and individuals contacted may be upset or unreasonable. Contacts may also be made with individuals at all levels throughout the District.

C. Influencing individuals or groups

The employee is required to interpret laws, policies, and procedures to individuals who may be confrontational or to deal with members of professional, business, community, or other groups or regulatory agencies as a representative of the District.

D. Negotiation with organizations from a position of authority

The employee often deals with the Board of Directors, elected officials, government agencies, and other outside agencies, and the public to advance and represent the priorities and interests of the District, provide policy direction, and/or negotiate solutions to difficult problems.

7. Working Conditions/Physical Demands

This factor includes specific physical, situational, and other factors that influence the employee's working situation.

A. Normal office or similar setting

The work is performed in a normal office or similar setting during regular office hours (occasional overtime may be required, but compensated for). Responsibilities include meeting standard deadlines, using office and related equipment, lifting materials weighing up to 25 pounds, and communicating with others in a generally non-stressful manner.

B. Varied working conditions with some physical or emotional demands

The work is normally performed indoors, but may have some exposure to noise, heat, weather, or other uncomfortable conditions. Stand-by, call back, or regular overtime may be required. The employee may have to meet frequent deadlines, work extended hours, and maintain attention to detail at a computer or other machinery, deal with difficult people, or regularly perform moderate physical activity.

C. Difficult working conditions and/or physical demands

The work has distinct and regular difficult demands. Shift work (24-7 or rotating) may be required; there may be exposure to hazardous materials or conditions; the employee may



be subject to regular emergency callback and extended shifts; and/or the work may require extraordinary physical demands.

Based on the above factors, in the maintenance of the classification plan when an employee is assigned an additional duty or responsibility and requests a change in classification, it is reasonable to ask:

- What additional knowledge and skills are required to perform the duty?
- How does one gain this additional knowledge and skills – through extended training, through a short-term seminar, through on-the-job experience?
- Does this duty or responsibility require new or additional supervisory responsibilities?
- Is there a greater variety of or are there more complex problems that need to be solved as a result of the new duty?
- Does the employee have to make a greater variety of or more difficult decisions as a result of this new duty?
- Are the impacts of decisions greater because of this new duty (effects on staff, budget, District-wide activities, and/or relations with other agencies)?
- Are guidelines, policies, and/or procedures provided to the employee for the performance of this new duty?
- Is the employee interacting with internal and external stakeholders more frequently or for a different purpose as a result of this new assignment?
- Have the working or physical conditions of the job changed as a result of this new assignment?

The analysis of the factors outlined above, as well as the answers to these questions, were used to determine recommended classifications for all District employees. The factors above will also help to guide the placement of specific positions to the existing classification structure and/or revision of entire classification structure in the future.

Classification Allocation Recommendations

All class descriptions were updated in order to ensure that the format is consistent, and that the duties and responsibilities are current and properly reflect the required knowledge, abilities, and skills.

When evaluating the allocation of positions, the focus is on assigned job duties and the job-related requirements for successful performance, not on individual employee capabilities or amount of work performed. Positions are evaluated and classified on the basis of such factors as knowledge and skill required to perform the work, the complexity of the work, the authority delegated to make decisions and take action, the responsibility for the work of others and/or for budget expenditures, contacts with others (both inside and outside of the organization), the impact of the position on the organization, and working conditions.



Furthermore, it is necessary to: (i) identify the duties that the incumbents are currently being required to perform; (ii) determine if those duties are captured in the current classification description; and (iii) identify the percentage of duties being performed, if any, which are outside of the current classification.

All recommended position allocations are presented in Appendix II.

Title Change

One change in the classification plan, as noted above, was the title change for one classification.

Table 2. Title Change Recommendations

Current Classification Title	Proposed Classification Title
Field Operations Supervisor	Operations Supervisor

Title changes are recommended to more clearly reflect the level and scope being performed, as well as establish consistency with the labor market and industry standards. Any compensation recommendations are not dependent upon a new title, but upon the market value as defined by job scope, level and responsibilities, and the qualifications required for successful job performance.

Reclassification

Reclassification recommendations are made for positions that are working out of class due to level and scope of work and/or job functions that have been added or removed from those positions over time. There were no positions identified and recommended for reclassification.

New Classifications

The study resulted in the development of one new classification. We have found the District had a need for an Accountant classification responsible for performing professional accounting work, including auditing, analyzing, and verifying fiscal records and reports; preparing financial and statistical reports, providing information to District staff regarding accounting practices and procedures, and reconciling general ledger accounts; assisting in preparing the District’s annual and mid-year budgets; and preparing year-end audit reports and schedules.



CONCLUSION

The revised classification descriptions serve as a general description of the work performed and provide a framework of the expectations of each position for the employee. Requests for the addition of new positions and classifications and/or reclassification of an existing position should follow established District policies and procedures. Any decisions related to the addition of new positions and classifications, reclassification of an existing position, and promotion of an existing position will depend on the needs and resources of the District and the availability of work, as well as the ability of existing positions to meet the qualifications of and perform the duties of the higher-level class.

Finally, as mentioned previously, a classification plan is not a static, unchanging entity. The classification plan should be reviewed on a regular, on-going basis and may be amended or revised as required.

It has been a pleasure working with Mid-Peninsula Water District on this critical project. Please do not hesitate to contact us if we can provide any additional information or clarification regarding this report.

Respectfully submitted by,
Koff & Associates

A handwritten signature in cursive script that reads "Alyssa Thompson".

Alyssa Thompson
Senior Project Manager



Appendix I

New Classification Descriptions

ACCOUNTANT

DEFINITION

Under general supervision, performs professional accounting work, including auditing, analyzing, and verifying fiscal records and reports; prepares financial and statistical reports, provides information to District staff regarding accounting practices and procedures, and reconciles general ledger accounts; assists in preparing the District's annual and mid-year budgets; prepares year-end audit reports and schedules; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Administrative Services Manager. Exercises no supervision over staff.

CLASS CHARACTERISTICS

This is a journey-level professional accounting classification. While most work is subject to review from the Administrative Services Manager, incumbents exercise discretion and independent judgment in performing accounting and financial activities for the District. Successful performance of the work requires considerable knowledge of governmental accounting practices and procedures, fund accounting, and fiscal management. This class is distinguished from the Administrative Services Manager in that the latter has management responsibility for all administrative services functions and programs.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Provides responsible professional and technical assistance in the administration and implementation of the District's financial, auditing, and accounting programs and activities including accounts payable, utility billing, accounts receivable, payroll, and reporting.
- Prepares journal entries and reconciles general ledger, subsidiary accounts, and other accounting transactions and reports; compiles and prepares periodic financial schedules and reports; maintains spreadsheets on interest income and expenses.
- Assists in preparation of monthly, quarterly, and annual financial statements and footnotes; prepares a variety of periodic, and special financial reports for operational use, and for presentation to the Board of Directors.
- Analyzes and reconciles expenditure and revenue accounts, verifying availability of funds and classification of expenditures; researches and analyzes transactions to resolve problems.
- Monitors cash receipts and reconciles monthly bank statements.
- Reviews accounting documents to ensure accurate information and calculations, and makes original and correcting journal entries; examines supporting documentation for accuracy and completeness, and to ensure proper authorizations; prepares and maintains control and subsidiary accounting records involving fixed assets and other special accounts.

- Coordinates and performs grants administration and reporting; ensures compliance with federal, state and local regulations.
- Verifies the accuracy of timekeeping reports and calculations; researches discrepancies and makes corrections; prepares state and federal tax reports, W-2's, and 1099's.
- Interprets, explains and applies general and governmental accounting/auditing principles and procedures, laws, and regulations affecting the financial operations of municipal government.
- Reviews documentation submitted for accuracy and conformance to legal and procedural requirements.
- Participates in the compilation and preparation of the annual budget, including assisting management with budget preparation, providing estimated grant revenues and expenditures, monitoring expenditures to ensure compliance with adopted budget, and assisting in publication of the budget.
- Assists in preparing audit schedules for external auditors and assists the Administrative Services Manager during the annual auditing process; confers with managers and staff regarding new or modified fiscal procedures and ensures that internal controls are observed.
- Attends meetings, conferences, workshops, and training sessions, and reviews publications to maintain current knowledge of principles, practices, and new developments in accounting and reporting requirements, policies and procedures; recommends and implements changes to accounting policy and procedures to ensure compliance with governmental requirements and regulations.
- Assists the Administrative Services Manager with special projects as required.
- Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- Modern principles, practices, and methods of public and governmental accounting and financing, including program budgeting, auditing and their application to special district operations, financial statement preparation, and methods of financial control and reporting.
- General principles and practices of data processing and its applicability to accounting operations.
- Applicable federal, state, and local ordinances, resolutions and laws affecting financial operations.
- Principles and practices of business organization and public administration.
- Record keeping principles and procedures.
- Modern office practices, methods, and computer equipment and applications.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Analyze financial data and draw sound conclusions.
- Analyze, post, balance, and reconcile complex financial data and accounts.
- Ensure proper authorization and documentation for disbursements.
- Evaluate and recommend improvements in operations, procedures, policies or methods.
- Analyze situations accurately and recommend effective course of action.
- Understand and carry out a variety of complex instructions in a responsible and independent manner.
- Prepare clear, complete and concise financial statements and reports.
- Understand, interpret, apply, and explain applicable federal, state, and local policies, procedures, laws, and regulations.

- Collect, obtain, evaluate, and interpret technical and specialized financial information correctly and explain information clearly, accurately, and concisely to customers.
- Establish and maintain a variety of files and records.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment, including computer equipment and software programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Understand, and adhere to established District standards, policies, and procedures.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be

Equivalent to graduation from an accredited four-year college or university with major coursework in accounting, finance, business or public administration, or a related field and four (4) years of professional accounting experience. Experience in a governmental or public utility setting is desirable.

Licenses and Certifications:

- None.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; to operate a motor vehicle to visit various District and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio. This is primarily a sedentary office classification, although standing and walking between work areas may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 25 pounds.

ENVIRONMENTAL ELEMENTS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to potentially hazardous physical substances. Employees may interact with upset staff, public and private representatives, and/or contractors in interpreting and enforcing District policies and procedures.

ADMINISTRATIVE ASSISTANT

DEFINITION

Under general supervision, performs a variety of responsible customer support and billing duties related to the establishment and maintenance of customer accounts; provides direct customer service associated with utility payments, requests for service, responding to complaints, and providing information; performs a wide variety of clerical accounting support duties in the preparation, maintenance, and processing of accounts payable transactions and records; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Administrative Services Manager. Exercises no supervision over staff.

CLASS CHARACTERISTICS

This is a journey-level class where incumbents are expected to perform the full range of customer service and clerical accounting support duties and are required to work independently and use sound judgment. The work requires application and interpretation of policies, procedures, and regulations and involves frequent contact with the public. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit. This class is distinguished from the Administrative Specialist in that the latter is responsible for overseeing all monthly utility billing functions and performs the more complex customer service duties such as determining and approving account adjustments.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Provides front-line customer service support by greeting customers at the front desk or by telephone.
- Responds and provides information to customer inquiries and complaints in person or by telephone; researches, identifies potential causes, and provides recommendations for the resolution of unusual billing situations; and represents the District to callers and visitors in a professional and customer friendly manner.
- Interprets policies and procedures and explains service fees, rates, and procedures to customers; may waive fees under appropriate circumstances and with supervisory approval.
- Receives and processes service requests and transfer orders, sets up and closes accounts, processes "in and out" tags; determines and collects necessary charges and secures legal documents regarding property descriptions and ownership; resolves issues and problems regarding the processing of orders and delinquent accounts.
- Receives, audits, and processes customer payments, balances monies received, and prepares receipts; assists with completing bank deposits and posting payments to customer accounts.

- Receives, stamps, codes, processes, and scans invoices; prepares checks for mailing; maintains records of invoices and check stubs.
- Inputs expense statements into the financial system for payment.
- Assists with District's records retention program including scanning records and files and maintaining a records tracking and maintenance schedule.
- Maintains accurate and detailed records, verifies accuracy of information, researches discrepancies, and records information.
- Verifies and reviews forms and reports for completeness and conformance with established regulations and procedures; applies District policies and procedures in determining completeness of applications, records, and files.
- Prepares, copies, collates, and distributes a variety of documents; ensures proper filing of copies in District files.
- Composes, types, formats, and proofreads a wide variety of reports, letters, documents, and correspondence; checks drafts for punctuation, spelling, and grammar; suggests corrections.
- Receives, opens, time stamps, sorts, and distributes incoming mail; prepares and distributes outgoing mail.
- Maintains, updates, and retrieves information from District record systems and specialized databases.
- Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Practices and procedures related to accounting for receipts and the maintenance of customer accounts.
- Terminology and practices of financial and account document processing and recordkeeping, including accounts payable and utility billing.
- District policies and procedures related to assigned area of responsibility.
- Principles and practices of data collection and report preparation.
- Business arithmetic and basic statistical techniques.
- Basic business letter writing and the standard format for reports and correspondence.
- Recordkeeping principles and procedures.
- Modern office practices, methods, and computer equipment and applications.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Deal tactfully with the public and others in providing information, answering questions, and providing customer service, even under difficult or stressful conditions.
- Respond to and effectively prioritize multiple phone calls and other requests or interruptions.
- Perform detailed customer service and accounting office support work accurately and in a timely manner.
- Balance cash receipts and maintain accurate financial records.
- Make accurate arithmetic, financial, and statistical computations.
- Compose correspondence independently or from brief instructions.
- Enter and retrieve data from a computer with sufficient speed and accuracy to perform assigned work.

- Interpret, apply, explain, and ensure compliance with applicable District policies and procedures.
- Maintain detailed and accurate records.
- Organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment, including computer equipment and specialized software programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Understand, and adhere to established District standards, policies, and procedures.
- Establish and maintain effective working relationships with those contacted in the course of the work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to the completion of the twelfth (12th) grade and three (3) years of experience in providing general customer service and basic accounting support, and knowledge of work processes and clerical office administration procedures.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid California Driver's License by time of appointment.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; to operate a motor vehicle to visit various District and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person, before groups, and over the telephone. This is primarily a sedentary office classification, although standing and walking between work areas may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 35 pounds.

ENVIRONMENTAL ELEMENTS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to potentially hazardous physical substances. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing District policies and procedures.

ADMINISTRATIVE SERVICES MANAGER

DEFINITION

Under general direction, plans, supervises, coordinates, and reviews the work of staff performing customer service, utility billing, finance, accounting, water conservation, public outreach, and administrative support functions; administers finance and human resources; acts as the Board Secretary; serves as a liaison and coordinates assigned activities with other District departments and external agencies to ensure compliance with reporting/procedures; provides responsible and complex administrative and operational assistance to the General Manager; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general direction from the General Manager. Exercises direction and supervision over professional, technical, and administrative support staff.

CLASS CHARACTERISTICS

This is a management classification responsible for planning, organizing, reviewing, and evaluating the Administrative Services Department. Responsibilities include developing and implementing policies and procedures for assigned programs, budget administration and reporting, regulatory compliance, and program evaluation. Incumbents serve as a professional resource for organizational, managerial, and administrative analyses and studies. Responsibilities include coordinating the activities of the department with those of other departments and outside agencies, and managing and overseeing the complex and varied functions of the department. The incumbent is accountable for accomplishing departmental planning and operational goals and objectives, and for furthering District goals and objectives within general policy guidelines.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Assumes managerial responsibility for all projects, programs, and activities of the Administrative Services Department, including customer service, utility billing, accounts receivable, water conservation, public outreach, and office management.
- Directs and participates in the development and implementation of goals, objectives, policies, and priorities for the department; recommends, within District policy, appropriate service and staffing levels; recommends and administers policies and procedures while ensuring financial, regulatory, and legal requirements are met.
- Selects, trains, motivates, and directs department personnel; evaluates and reviews work for acceptability and conformance with District standards, including program and project priorities and performance evaluations; provides or coordinates staff training; works with employees to correct

- deficiencies; implements discipline and termination procedures; responds to staff questions and concerns.
- Manages and administers the District and department budgets; directs the forecast of additional funds needed for staffing, equipment, and supplies; directs the monitoring of and approves expenditures; directs the preparation and implementation of budgetary adjustments.
 - Contributes to the overall quality of the District's service by continuously monitoring and evaluating the efficiency and effectiveness of service delivery methods and procedures; assesses and monitors the distribution of work, support systems, and internal reporting relationships; identifies opportunities for improvement; directs the implementation of change.
 - Oversees the development of consultant requests for proposal for professional and/or construction services and the advertising and bid processes; evaluates proposals and recommends project award; administers contracts after award.
 - Administers the daily human resources functions and activities, including benefits administration, recruitment and selection, classification and compensation, employee relations, property and liability insurances, and risk management.
 - Supervises and participates in all activities related to the District's finance and accounting function, including accounts payable, accounts receivable, payroll, year-end closing, bank reconciliation, and financial reporting.
 - Directs and oversees the completion of the District's annual audit; works with external auditors to ensure responses are complete, well documented, and provided in a timely manner.
 - Plans, directs, and coordinates customer service and utility billing activities; oversees payment processing and electronic bill systems.
 - In coordination with the General Manager, oversees the implementation of water conservation and public outreach programs.
 - Acts as the Board Secretary; attends a variety of meetings; prepares meeting agendas and gathers background information for agenda items; assembles and distributes agenda packets, meeting records, and all enclosures for mailings; sets up meeting rooms; reviews and approves minutes; distributes documents resulting from Board action; prepares legal and informational notices on behalf of the District.
 - Provides highly complex staff assistance to the General Manager; develops and reviews staff, financial, and regulatory reports related to assigned activities and services; presents information to the Board of Directors and other external councils, commissions, committees, and boards; performs a variety of public relations and outreach work related to assigned activities.
 - Conducts a variety of organizational studies, investigations, and operational studies; recommends modifications to administrative services programs, policies, and procedures.
 - Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of administrative services; researches emerging products and enhancements and their applicability to meet District needs.
 - Monitors changes in regulations and technology that may affect District operations; implements policy and procedural changes after approval.
 - Receives, investigates, and responds to difficult and sensitive problems and complaints in a professional manner; identifies and reports findings and takes necessary corrective action.
 - Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Administrative principles and practices, including goal setting, program development, implementation, evaluation, and project management.
- Principles and practices of finance, budget administration, general and governmental accounting, auditing, and reporting functions; sound financial management policies and procedures.
- Principles and practices of customer service and utility billing functions.
- Principles and practices of human resources administration.
- Principles and practices of water conservation and public outreach program administration.
- Principles, practices, and procedures related to public agency recordkeeping and the Board Secretary function.
- Principles and practices of employee supervision, either directly or through subordinate levels of supervision, including work planning, assignment review and evaluation, and the training of staff in work procedures.
- Organization and management practices as applied to the development, analysis, and evaluation of programs, policies, and operational needs of the assigned functional area.
- Applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Practices of researching administrative services issues, evaluating alternatives, making sound recommendations, and preparing and presenting effective staff reports.
- General principles of risk management related to the functions of the assigned area.
- Technical, legal, financial, and public relations problems associated with the management of administrative services projects and programs.
- Modern office practices, methods, and computer equipment and applications.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for effectively representing the District in contacts with government agencies; community groups; and various business, professional, regulatory, and legislative organizations.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Recommend and implement goals, objectives, and practices for providing effective and efficient services.
- Administer complex and technical administrative services programs in an independent and cooperative manner.
- Plan, organize, assign, review, and evaluate the work of staff; train staff in work procedures.
- Prepare and administer large and complex budgets; allocate limited resources in a cost-effective manner.
- Evaluate and develop improvements in procedures, policies, or methods.
- Analyze, interpret, summarize, and present administrative and financial information and data in an effective manner.
- Interpret, apply, explain, and ensure compliance with federal, state, and local policies, procedures, laws, and regulations.
- Conduct complex research projects, evaluate alternatives, make sound recommendations, and prepare effective technical staff reports.

- Effectively represent the District in meetings with governmental agencies; community groups; various businesses, professional, and regulatory organizations; and in meetings with individuals.
- Research, analyze, and evaluate new service delivery methods, procedures, and techniques.
- Prepare clear and concise reports, correspondence, procedures, and other written materials.
- Oversee the development and maintenance of a variety of manual and computerized files, recordkeeping, and project management systems.
- Make sound, independent decisions within established policy and procedural guidelines.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment, including computer equipment and software programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Understand, and adhere to established District standards, policies, and procedures.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to graduation from an accredited four-year college or university with major coursework in finance, accounting, business or public administration, or a related field, and five (5) years of increasingly responsible experience managing and/or supervising finance and accounting functions. Experience in a governmental or public utility setting is preferred and experience human resources and/or customer service is desirable.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid California Driver's License by time of appointment.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; to operate a motor vehicle to visit various District and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio. This is primarily a sedentary office classification, although standing and walking between work areas may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 25 pounds.

ENVIRONMENTAL ELEMENTS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to potentially hazardous physical substances. Employees may interact with upset staff, public and private representatives, and/or contractors in interpreting and enforcing District policies and procedures.

ADMINISTRATIVE SPECIALIST

DEFINITION

Under general supervision, coordinates and oversees utility billing and customer service functions; researches and conducts investigations into the more complex or non-routine customer service billing and account issues; serves as administrator for the utility billing system; plans, coordinates, and implements water conservation and public outreach programs; develops reports in compliance with federal, state, and local requirements; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Administrative Services Manager. May provide technical and functional direction and training to assigned staff as needed.

CLASS CHARACTERISTICS

This is an advanced journey-level, specialist classification within administrative services responsible for performing a wide range of billing, systems administration, and reporting duties and/or developing and implementing the District's water conservation program and activities, as well as researching, responding to, and resolving complex customer account and billing issues. The work requires application and interpretation of policies, procedures, and regulations and involves frequent contact with the public. Employees at this level are required to be fully trained in all procedures related to the assigned area(s) of responsibility, working with a high degree of independent judgment, tact, and initiative. Employees research, select, and apply the most appropriate methods to accomplish assigned tasks and handle problems and deviations in work assignments in accordance with established policies and procedures. Completed work is usually evaluated for soundness, appropriateness, and conformity to policy and requirements and the methods used in arriving at the end results are not usually reviewed in detail. This class is distinguished from the Administrative Services Manager in that the latter has management responsibility for all administrative services functions and programs.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

When assigned to Utility Billing/Customer Service

- Generates monthly billing by receiving and importing meter reads, reviewing and calculating monthly bills, making adjustments as necessary, creating and sending billing file for printing, and sending out electronic bills.
- Analyzes utility bills by investigating customer usage, researching historical consumption, identifying usage patterns, recommending water use efficiency measures, determining if field investigation is required and scheduling field appointments, and recommending account adjustments.

- Interprets policies and procedures and explains service fees, rates, and procedures to customers; may waive fees under appropriate circumstances and with supervisory approval.
- Prepares utility bills and notices, including final bills, past due notices, 48-hour shut-off warning notices, and shut-offs.
- Receives, processes, and uploads customer automatic payments; receives and processes payments received in-person or via mail; creates bank deposits and uploads deposits to the District's bank account; maintains and balances petty cash box.
- Processes requests for new or cancelled accounts, meter changes, and related utility billing activities as required.
- Serves as billing system administrator by maintaining and auditing data; creating and maintaining reports; establishing internal controls and procedures; researching, monitoring, and implementing updates and enhancements; troubleshooting basic system issues; coordinating the resolution of system problems with outside vendors; and training staff on process and system changes.
- Participates in the evaluation, development, and documentation of utility billing workflow, policies, and procedures; recommends changes for improvement and efficiency; implements changes upon approval.
- Generates utility billing and water consumption reports; collects and checks data; researches assigned topics to provide a wide range of information and assistance relating to District billing activities; prepares and assembles reports, manuals, articles, announcements, and other informational materials.

When assigned to Water Use Efficiency

- Plans, promotes, and implements water conservation, water education, and public outreach initiatives and campaigns; evaluates program effectiveness and makes recommendations, and presentations for the development and implementation of new and/or modified services; coordinates content for Annual Water Conservation Report and District newsletter; updates water conservation website.
- Assists in the preparation and administration of specific program budgets; submits program budget recommendations; forecasts additional funds needed for specific staffing, equipment, materials, and supplies.
- Delivers water conservation initiatives for District customers, including but not limited to landscape audits, rebate programs, school education programs, and community events; develops and writes water conservation and water education materials.
- Conducts research and analysis related to water use, supply, and demand; receives, completes, and submits surveys from Bay Area Water Supply and Conservation Agency (BAWSCA), San Francisco Public Utilities Commission, State Water Resources Control Board, and the Department of Water Resources; compiles, prepares, and submits reports to various regulatory agencies.
- Represents the District on water conservation issues at the local and regional level; attends and participates in conservation meetings, and serves on committees established by other agencies such as BAWSCA and California Urban Water Conservation Council.
- Develops and maintains positive working relationships to coordinate program development and implementation with local and state agencies, regulators, community groups, industry professionals, and other stakeholders.
- Updates the District's Urban Water Management Plan and related reports.

All Assignments

- Responds and provides information to customer inquiries and complaints in person or by telephone; represents the District to callers and visitors in a professional and customer friendly manner.
- Prepares regulatory and staff reports by researching and analyzing data and interpreting results; prepares recommendations for management and/or Board review and action.
- Maintains accurate and detailed records, verifies accuracy of information, researches discrepancies, and records information.
- Verifies and reviews forms and reports for completeness and conformance with established regulations and procedures; applies District policies and procedures in determining completeness of applications, records, and files.
- Prepares, copies, collates, and distributes monthly Board packets and a variety of documents; ensures proper filing of copies in District files; attends Board meetings; takes and prepares meeting minutes; distributes minutes upon approval.
- Screens calls, visitors, and incoming mail; assists the public at front counter and directs to appropriate locations and/or staff; responds to complaints and requests for information; assists in interpreting and applying regulations, policies, procedures, systems, rules, and precedents in response to inquiries and complaints from the public; directs callers to appropriate District staff as necessary.
- Composes, types, formats, and proofreads a wide variety of reports, letters, documents, and correspondence; checks drafts for punctuation, spelling, and grammar; suggests corrections.
- Maintains, updates, and retrieves information from District record systems and specialized databases.
- Monitors and orders office and other related supplies; prepares, processes, and tracks purchase requisitions for services and materials; receives vendor invoices; prepares request for payment for supervisor approval.
- Monitors changes in laws, regulations, and technology that may affect assigned areas of responsibility; recommends modifications to assigned programs and District policies, procedures, and ordinances; implements changes as required.
- Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of utility billing, customer service, water conservation, and related programs as they relate to the area of assignment.
- Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

When assigned to Utility Billing/Customer Service

- Practices and procedures related to accounting for receipts and the maintenance of customer accounts.
- Principles and practices of utility billing database management and reporting.
- Terminology and practices of financial and account document processing and recordkeeping, including accounts payable and utility billing.

When assigned to Water Use Efficiency

- Practices, theories, methods, and techniques used in the administration and evaluation of water conservation and public outreach programs.

- Principles, methods, and techniques used in the distribution of information to targeted audiences.

All Assignments

- Principles and practices of data collection, analysis, identifying trends and patterns, and recommendation development.
- Applicable federal, state, and local laws, regulatory codes, and ordinances, and District policies and procedures relevant to assigned area of responsibility.
- Business arithmetic and basic statistical techniques.
- Basic business letter writing and the standard format for reports and correspondence.
- Recordkeeping principles and procedures.
- Research and reporting methods, techniques, and procedures.
- Recent and ongoing developments, current literature, and sources of information related to assigned programs, projects, and services.
- Modern office practices, methods, and computer equipment and applications.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

When assigned to Utility Billing/Customer Service

- Perform detailed utility billing and customer service support work accurately and in a timely manner.
- Balance cash receipts and maintain accurate financial records.

When assigned to Water Use Efficiency

- Plan and implement water conservation, public outreach, and related programs, projects, and activities in an independent and cooperative manner.

All Assignments

- Deal tactfully with the public and others in providing information, answering questions, and providing customer service, even under difficult or stressful conditions.
- Research, analyze, interpret, summarize, and present information and data in an effective manner.
- Respond to and effectively prioritize multiple phone calls and other requests or interruptions.
- Make accurate arithmetic, financial, and statistical computations.
- Enter and retrieve data from a computer with sufficient speed and accuracy to perform assigned work.
- Effectively represent the District in meetings with governmental agencies; community groups; various businesses, professional, and regulatory organizations; and in meetings with individuals.
- Interpret, apply, explain, and ensure compliance with federal, state, and local policies, procedures, laws, and regulations.
- Research, analyze, and evaluate new service delivery methods, procedures, and techniques.
- Prepare clear and concise reports, correspondence, procedures, and other written materials.
- Establish and maintain a variety of manual and computerized files and recordkeeping.
- Make sound, independent decisions within established policy and procedural guidelines.

- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment, including computer equipment and specialized software programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Understand, and adhere to established District standards, policies, and procedures.
- Establish and maintain effective working relationships with those contacted in the course of the work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to an associate's degree from an accredited college or two (2) years of college-level coursework in accounting, environmental studies, water resources, communication, public administration, business administration, or a related field, and five (5) years of increasingly responsible experience in providing utility billing and/or customer service. Graduation from an accredited four-year college or university with major coursework in finance, accounting, business or public administration, or related field is desirable.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid California Driver's License by time of appointment.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; to operate a motor vehicle to visit various District and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person, before groups, and over the telephone. This is primarily a sedentary office classification, although standing and walking between work areas may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 35 pounds.

ENVIRONMENTAL ELEMENTS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to potentially hazardous physical substances. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing District policies and procedures.

GENERAL MANAGER

DEFINITION

Under policy direction, plans, organizes, and provides administrative direction and oversight for all District functions and activities; provides policy guidance and program evaluation to the Board of Directors and management staff; encourages and facilitates provision of services to District customers; fosters cooperative working relationships with intergovernmental and regulatory agencies and various public and private groups; pursues appropriate avenues of economic and community development; and performs related work as required

SUPERVISION RECEIVED AND EXERCISED

Receives policy direction from the Board of Directors. Exercises direction and supervision to all District staff through subordinate levels of supervision.

CLASS CHARACTERISTICS

The General Manager serves as the Chief Executive Officer of the District, accountable to the Board of Directors and responsible for enforcement of all District ordinances, policies, and procedures, the conduct of all financial and human resources activities and the efficient and economical performance of the District's operations.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Plans, organizes, administers, and evaluates District operations, programs, projects, and activities in accordance with applicable laws, ordinances, and regulations, strategic plan, and Board policies and objectives.
- Directs and coordinates the development and implementation of goals and objectives for the District; develops administrative policies, procedures, and work standards to ensure that the goals and objectives are met and that programs provide mandated services in an effective, efficient, and economical manner.
- Oversees the preparation of the annual capital improvement and operating budgets for the District; authorizes directly or through staff, budget transfers, expenditures, and purchases; provides information regarding the financial condition and needs to the Board of Directors.
- Advises the Board of Directors on issues, programs, and financial status; prepares and recommends long- and short-term plans for District service provision, capital improvements, and funding; and directs the development of specific proposals for action regarding current and future District needs.
- Oversees the administration, construction, use and maintenance of all District infrastructure, facilities and equipment.

- Administers and directs labor relations, including discipline, grievances, and all matters relating to the Memoranda of Understanding; represents the District in matters of concern to unions representing District employees; develops and manages the implementation of management strategies for negotiations during meet and confer sessions with various employee organizations.
- Develops, organizes, and manages various public information and legislative affairs programs related to District services and activities; represents and advocates the District's interests with federal, state, local, and elected and government officials; acts as the District liaison with the media.
- Represents the District and the Board of Directors in meetings with governmental agencies, community groups, and various business, professional, educational, regulatory and legislative organizations.
- Provides for the investigation and resolution of complaints regarding the administration of and services provided by the District.
- Provides for contract services and ensures proper performance of obligations to the District; has responsibility for enforcement of all District policies and procedures.
- Oversees the selection, training, professional development, and work evaluation of District staff; oversees the implementation of effective employee relations and related programs; provides policy guidance and interpretation to staff.
- Directs the preparation of and prepares a variety of correspondence, reports, policies, procedures, and other written materials.
- Oversees the maintenance of working and official District files.
- Monitors changes in laws, regulations, and technology that may affect District operations; implements policy and procedural changes as required.
- Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- Administrative principles and practices, including goal setting, program development, implementation and evaluation, budget development and administration, and supervision of staff, either directly or through subordinate levels of supervision.
- Principles and practices of capital improvement program, budget, and contract development and administration.
- Principles and practices of employee supervision, either directly or through subordinate levels of supervision, including work planning, assignment review and evaluation, and the training of staff in work procedures.
- Organization and management practices as applied to the development, analysis, and evaluation of programs, policies, and operational needs of the assigned functional area.
- Principles and practices of water production, distribution, and storage systems operations and maintenance program development and administration.
- Applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Principles, practices, and procedures of public administration including financial management, human resources, and labor relations programs.
- Functions, authority, responsibilities, and limitations of an elected Board of Directors.
- General principles of risk management related to the functions of the assigned area.
- Technical, legal, financial, and public relations problems associated with the management of water production and distribution operations and maintenance projects and programs.

- Modern office practices, methods, and computer equipment and applications.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for effectively representing the District in contacts with government agencies; community groups; and various business, professional, regulatory, and legislative organizations.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Plan, administer, coordinate, review, and evaluate the functions, activities, and staff of the District.
- Work cooperatively with, provide staff support to, and implement the policies of the Board of Directors.
- Develop and implement goals, objectives, policies, procedures, work standards, and internal controls.
- Administer complex and technical human resources, financial management, and water production, distribution, and storage systems operations and maintenance, capital improvement, and related programs in an independent and cooperative manner.
- Interpret, apply, explain, and ensure compliance with federal, state, and local policies, procedures, laws, and regulations.
- Effectively represent the District in meetings with governmental agencies, community groups, and various business, professional, educational, regulatory and legislative organizations and the media.
- Direct the preparation of and prepare clear and concise reports, correspondence, policies, procedures, and other written materials.
- Prepare accurate and effective reports, policies, procedures, and other written materials.
- Analyze problems, identify alternative solutions, project consequences of proposed actions, and implement recommendations in support of goals.
- Use sound independent judgment within general legal, policy, and procedural guidelines.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment, including computer equipment and software programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Understand, and adhere to established District standards, policies, and procedures.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to graduation from a four-year college or university with major coursework in business or public administration, engineering, finance, public policy, management, or a related field and seven (7) years of management or administrative experience in a public agency setting, preferably in the water industry. Master's degree is desirable. Experience working with an elected Board or Council is desirable.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid California Driver's License by time of appointment.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; to operate a motor vehicle to visit various District and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio. This is primarily a sedentary office classification, although standing and walking between work areas may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 25 pounds.

ENVIRONMENTAL ELEMENTS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to potentially hazardous physical substances. Employees may interact with upset staff, public and private representatives, and/or contractors in interpreting and enforcing District policies and procedures.

LEAD OPERATOR

DEFINITION

Under general supervision, administers the District's water quality program; administers the District's safety and loss prevention programs; organizes, plans, and assists in scheduling all necessary resources to accomplish operations and maintenance activities; performs a variety of skilled tasks in the installation, maintenance, and repair of the District's water distribution system and infrastructure, and District facilities; performs a variety of skilled tasks in the operation, control, and maintenance of the District's water production systems and facilities; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Operations Manager. May exercise technical and functional direction and training to assigned staff.

CLASS CHARACTERISTICS

This is an advanced journey-level class responsible for administering various District programs such as water quality, safety and risk management, operations and maintenance planning, fleet services, and inventory management. Incumbents also perform the full range of technical duties required to ensure that the District's infrastructure, systems, and facilities are maintained in a safe and effective working condition. Performance of the work requires the use of independence, initiative, and discretion. Incumbents are assigned tasks that are varied and complex, requiring the use of discretion and independent judgment within established guidelines, and ensuring the efficient and effective functioning of operations and maintenance areas. Assignments are given with general guidelines and incumbents are responsible for establishing objectives, timelines, and methods to deliver work products or services. Work is typically reviewed upon completion for soundness, appropriateness, and conformity to policy and requirements. This position is distinguished from the Operations Supervisor in that the latter is the full supervisory-level class in the series responsible for organizing, assigning, supervising, and reviewing the work of assigned staff.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Administers the District's water quality program by utilizing Supervisory Control and Data Acquisition System (SCADA) to ensure efficient operation of the water treatment and distribution systems including wells, water storage tanks, pump stations, and hydrants.
- Monitors and controls the operation of water distribution and storage systems, including monitoring nitrification and coliform levels; performing chemical pump drawdowns; adjusting flows; and calculating, adjusting, and setting optimal chemical dosage levels by adjusting chemical feeders.
- Observes variations in operating conditions by interpreting meter, gauge, graph readings, and tests results to determine pressure and flow requirements to meet demand.

- Prepares and maintains detailed logs, records, and reports on a variety of water production system operations, tests, system maintenance performed, operating conditions, and inspection results; submits reports to regulatory agencies such as the State Water Resources Control Board (SWRCB).
- Takes samples from sampling stations located throughout the District's service area to measure system performance and to ensure compliance with water quality standards; performs basic water quality analysis tests; delivers samples to the laboratory for further testing and analysis; maintains records and databases.
- Receives and responds to service calls and customer complaints regarding water quality.
- Administers the District's safety program, including maintaining the Injury and Illness Prevention Program; reviews and investigates reports of accidents, identifies any violations, and develops reports for the General Manager; identifies and coordinates training for staff; conducts regular, ongoing safety meetings with staff; administers the safety incentive program; maintains accurate records and reports.
- Administers the District's loss prevention program, including receiving incident reports, investigating loss, and coordinating claim processing with third-party insurance companies.
- Organizes, plans, and schedules all necessary tools, equipment, and vehicles needed to accomplish operations and maintenance activities; maintains inventory of parts, tools, and equipment.
- Estimates costs of operations, maintenance, repair work, supplies, equipment, and materials; orders supplies and equipment for work projects; maintains records of purchase orders; assists in developing budget figures for assigned area of responsibility; monitors expenditures.
- Coordinates the fleet maintenance program, including implementing preventative maintenance program, coordinating major maintenance and repair with contractors, completing and maintaining fuel tank inspection reports, and ensuring compliance with environmental and regulatory requirements.
- Performs construction, maintenance, repair, and inspection of District facilities.
- Performs the duties of a Water System Operator, as assigned, including responding to after-hours emergencies, assisting other staff as needed and in emergency or relief situations, and performing on-call, stand by duty on a regular basis.
- Identifies opportunities for improving service delivery methods and procedures; provides recommendations concerning process changes; reviews with appropriate management staff; implements improvements.
- Ensures compliance with various water quality and regulatory requirements, such as Environmental Protection Act, National Pollutant Discharge Elimination System (NPDES), SWRCB, and American Water Works Association standards.
- Inspects assigned District infrastructure for safety issues, structural integrity, and possible future work projects and programs; appropriately marks areas that need to be repaired.
- Provides needed information and demonstrations concerning how to perform certain work tasks to new employees in the same or similar class of positions.
- May provide technical and functional direction to staff.
- Attends training, meetings, workshops, etc., as required to enhance job knowledge and skills.
- Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Principles and practices governing water quality program compliance and reporting requirements.
- Policies, regulations, specifications, and requirements governing industrial safety, loss prevention, emergency preparedness, and accident prevention.

- Principles and practices related to planning and scheduling the operations and maintenance of the water distribution and storage systems and facilities, including ensuring the availability of required equipment, tools, and vehicles.
- Principles, practices, tools, and equipment required to operate and control water distribution and production systems and facilities.
- Maintenance principles, practices, tools, and materials for maintaining and repairing water distribution systems, infrastructure, and District fleet and facilities.
- Basic mechanical, electrical, and hydraulic principles.
- The operation and minor maintenance of a variety of hand and power tools, vehicles, and light to heavy power equipment.
- Occupational hazards and safety equipment and practices related to the work such as handling chemicals and working in and around confined spaces.
- Applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Traffic control procedures and traffic sign regulations.
- Principles and procedures of recordkeeping and reporting.
- Basic arithmetic related to the work.
- Safe driving rules and practices.
- Basic computer equipment and applications related to the work.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Develop, modify, implement, and coordinate the provision of a variety of safety training and loss prevention pertinent to water operations, including emergency preparedness and environmental compliance.
- Investigate field and office operations in order to implement and provide effective training and safety programs for a variety of staff covering a wide spectrum of operations and areas.
- Conduct safety inspections, identify problems, and work in collaboration with external regulatory agencies.
- Work independently and make effective judgments regarding compliance issues.
- Represent the District in matters related to safety, loss prevention, emergency preparedness, and environmental compliance programs as required.
- Plan and schedule operations and maintenance activities while ensuring all necessary tools, equipment, and vehicles needed to accomplish operations and maintenance activities are available.
- Implement and maintain an inventory control system.
- Perform skilled operation and maintenance of water production and storage systems and related infrastructure, facilities, and appurtenances similar to those at the District.
- Safely and effectively use and operate hand and power tools, mechanical equipment, and light to heavy equipment required for the work.
- Understand, apply, and ensure compliance with applicable federal, state, and local laws and regulations, and District policies and procedures.
- Make accurate arithmetic calculations.
- Set up and operate traffic area construction zones, including cones, barricades, and flagging.
- Read, interpret, and apply technical information from manuals, drawings, specifications, layouts, blueprints, and schematics.
- Follow department policies and procedures related to assigned duties.

- Maintain accurate logs and written records of work performed.
- Understand and follow oral and written instructions.
- Organize own work, set priorities, and meet critical time deadlines.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural, guidelines.
- Understand, and adhere to established District standards, policies, and procedures.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to the completion of the twelfth (12th) grade and five (5) years of experience in construction, maintenance, and repair of water utilities infrastructure, and/or operation, maintenance, and repair of water production systems and related facilities, including lead responsibility and accountability for a major operations and maintenance function.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid California Driver's License by time of appointment.

In addition, must possess two of the three certifications:

- Possession of a valid Grade II or higher Water Distribution Operator Certificate issued by the California Department of Public Health (CDPH).
- Possession of a valid Grade I Water Treatment Operator Certificate issued by the CDPH.
- Possession of at least one Automotive Service Excellence (ASE) certification required in the Automobile Technician certification series established by National Institute for Automotive Service Excellence.

PHYSICAL DEMANDS

Must possess mobility to work in the field; strength, stamina, and mobility to perform medium to heavy physical work, to work in confined spaces and around machines, to climb and descend ladders, to operate varied hand and power tools and construction equipment, and to operate a motor vehicle to visit various District sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate above-mentioned tools and equipment. Positions in this classification bend, stoop, kneel, reach, and climb to perform work and inspect work sites. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 80 pounds, or heavier weights with the use of proper equipment.

ENVIRONMENTAL ELEMENTS

Employees work in the field and are exposed to cold and hot temperatures, inclement weather conditions, road hazards, loud noise levels, vibration, confining workspaces, chemicals, mechanical and/or electrical

hazards, and hazardous physical substances and fumes. Employees may interact with upset staff, public and private representatives, and/or contractors in interpreting and enforcing District policies and procedures.

WORKING CONDITIONS

Required to be on-call and to work various shifts or emergencies during evenings, weekends, and/or holidays.

MAINTENANCE TECHNICIAN

DEFINITION

Under general supervision, makes field customer service calls to investigate and perform service connection, disconnection, meter adjustments, validate meter readings, and related customer service issues; reads meters; identifies and troubleshoots irregularities in meters and related equipment; assists in the installation, maintenance, and repair of the District's water distribution system and infrastructure; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Field Operations Supervisor. Exercises no supervision over staff.

CLASS CHARACTERISTICS

This class is responsible for providing on-site technical field customer service support, reading meters, and assisting in performing construction, maintenance, and repair work to ensure that the District's infrastructure, systems, and facilities are maintained in a safe and effective working condition. Initially under close supervision, incumbents with basic maintenance experience learn District infrastructure, systems, and facilities, use of tools and equipment, and a wide variety of practices and procedures. As experience is gained, assignments become more varied and are performed with greater independence. Positions at this level usually perform some of the duties required of the Water System Operator, but are not expected to function at the same skill level and usually exercise less independent discretion and judgment in matters related to work procedures and methods. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Reads water meters in accordance with an assigned schedule and route; cleans out and maintains area around meter boxes.
- Performs water meter maintenance, including installing new meters, testing and repairing meters of various sizes, locating and repairing leaks, and replacing meters as necessary; installs service lines and accounts for the installation of new or replacement meters.
- Receives and responds to service calls and customer complaints regarding issues such as leaks, high or low pressure, consumption levels, water conservation, and water quality; advises customers of problems and suggests solutions.
- Proactively and in a timely fashion contacts customers with high bills and/or unusual activity; conducts in-person site visits with customers as needed.
- Connects or disconnects water services according to work orders issued by customer service staff.

- Validates meter readings through re-readings in situations where readings appear to be abnormally high or low, verifying consumption, and checking for leaks; communicates with customers on how to detect leaks and manage water usage.
- Visits customer properties that are due to be shut off due to late payments and either tagging their home or talking to them in person.
- Assists in the construction, maintenance, and repair activities of District water utilities systems and infrastructure, including fire hydrants, pipelines, water production facilities and related pumping equipment, residential and commercial water meters, valve cans, meter boxes, water distribution valves, wells, and related facilities.
- Maintains, flushes, and repairs fire hydrants.
- Performs grounds maintenance such as mowing, weed abatement, and picking up trash and debris in and around pump stations, wells, tanks, and other District facilities.
- Reads and interprets maps and diagrams in the performance of the work.
- Observes safe work methods and makes appropriate use of related safety equipment as required.
- Performs preventative maintenance on vehicles and equipment; ensures proper functioning of equipment and vehicles needed.
- Operates and maintains light, medium, and heavy-duty equipment such as backhoes, skip loaders, dump trucks, forklifts, and other equipment appropriate to the functional area of assignment.
- Operates a variety of hand and power tools and equipment related to work assignment as instructed.
- Maintains work areas in a clean and orderly condition, including securing equipment at the close of the workday.
- Installs street barricades and cones, and controls traffic around work sites to ensure safe conditions for the general public and District staff.
- Inspects assigned District infrastructure for safety issues, structural integrity, and possible future work projects and programs; appropriately marks areas that need to be repaired.
- Notifies assigned supervisor of the need for repair or additional maintenance as found during routine inspection and cleaning activities; prepares work orders or notes service requirements.
- Provides needed information and demonstrations concerning how to perform certain work tasks to new employees in the same or similar class of positions.
- Maintains accurate logs and records of work performed and materials and equipment used.
- Attends training, meetings, workshops, etc., as required to enhance job knowledge and skills.
- Responds to after-hours emergencies and assists other staff as needed in emergency or relief situations.
- Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Basic practices involved in meter installation, reading, and repair.
- District service area, including street and address system.
- AMR/AMI meters, meter reading equipment, and their respective functions.
- Maintenance principles, practices, tools, and materials for maintaining and repairing water distribution systems and infrastructure.
- The operation and minor maintenance of a variety of hand and power tools, vehicles, and light to heavy power equipment.
- Occupational hazards and safety equipment and practices related to the work such as handling chemicals and working in and around confined spaces.

- Applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Traffic control procedures and traffic sign regulations.
- Principles and procedures of recordkeeping and reporting.
- Basic arithmetic related to the work.
- Safe driving rules and practices.
- Basic computer equipment and applications related to the work.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Deal tactfully with the public and others in providing information, answering questions, and providing customer service, even under difficult or stressful conditions.
- Safely and effectively operate tools and equipment used in meter installation, reading, and repair.
- Troubleshoot maintenance problems and determine materials and supplies required for repair.
- Safely and effectively use and operate hand and power tools, mechanical equipment, and light to heavy equipment required for the work.
- Understand, apply, and ensure compliance with applicable federal, state, and local laws and regulations, and District policies and procedures.
- Make accurate arithmetic calculations.
- Set up and operate traffic area construction zones, including cones, barricades, and flagging.
- Read and interpret maps and specifications.
- Follow department policies and procedures related to assigned duties.
- Maintain accurate logs and basic written records of work performed.
- Understand and follow oral and written instructions.
- Organize own work, set priorities, and meet critical time deadlines.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Understand, and adhere to established District standards, policies, and procedures.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to the completion of the twelfth (12th) grade and three (3) years of experience in the construction, maintenance, and repair of water utilities infrastructure, and/or the operation, maintenance, and repair of water production systems and related facilities.

Licenses and Certifications:

- Possession of a valid California Driver's License is desirable.
- Possession of a valid Grade I Water Distribution Operator Certificate issued by the California Department of Public Health is desirable.

PHYSICAL DEMANDS

Must possess mobility to work in the field; strength, stamina, and mobility to perform medium to heavy physical work, to work in confined spaces and around machines, to climb and descend ladders, to operate varied hand and power tools and construction equipment, and to operate a motor vehicle to visit various District sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate above-mentioned tools and equipment. Positions in this classification bend, stoop, kneel, reach, and climb to perform work and inspect work sites. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 80 pounds, or heavier weights with the use of proper equipment.

ENVIRONMENTAL ELEMENTS

Employees work in the field and are exposed to cold and hot temperatures, inclement weather conditions, road hazards, loud noise levels, vibration, confining workspaces, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff, public and private representatives, and/or contractors in interpreting and enforcing District policies and procedures.

WORKING CONDITIONS

Required to work various shifts or emergencies during evenings, weekends, and/or holidays as needed.

OPERATIONS SUPERVISOR

DEFINITION

Under general direction, plans, assigns, organizes, supervises, and reviews the daily construction, operation, control, maintenance, and repair of the District's water distribution and storage systems and infrastructure and District facilities; plans, prioritizes, and schedules capital improvement and maintenance projects; administers the District's asset management program; conducts research and analysis related to water use, supply, and demand; provides responsible and complex administrative and operational assistance to the Operations Manager; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general direction from the Operations Manager. Exercises supervision over operations and maintenance staff.

CLASS CHARACTERISTICS

This is a full supervisory-level class responsible for planning, organizing, supervising, reviewing, and evaluating the work of assigned staff responsible for constructing, operating, controlling, maintaining, and repairing water distribution and storage systems and facilities. Incumbents also have project coordination and programmatic responsibilities requiring the use of considerable independence, initiative, and discretion within established guidelines. This class is distinguished from the Operations Manager in that the latter has management responsibility for all operations and maintenance functions and activities of the District.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Supervises the work of assigned staff in the construction, operation, control, maintenance, and repair of water distribution and storage systems and infrastructure and District facilities; evaluates employee performance, counsels employees, and effectively recommends initial disciplinary action; assists in selection and promotion.
- Participates in the development and implementation of goals, objectives, policies, and priorities for assigned programs; recommends and administers policies and procedures.
- Monitors activities of assigned work unit; identifies opportunities for improving service delivery methods and procedures; provides recommendations concerning process changes; reviews with appropriate management staff; implements improvements.
- Trains staff in work and safety procedures and in the operation and use of equipment and supplies; implements procedures and standards; ensures that tools, equipment and vehicles are safely operated, maintained, and secured when not in use; schedules the service, repair, and replacement of tools and equipment.
- Determines and recommends equipment, materials, and staffing needs for assigned operations, maintenance, and repair projects and programs; procures equipment, materials, and tools required

to perform the work; participates in the annual budget preparation; prepares detailed cost estimates with appropriate justifications, as required.

- Inspects and verifies work in progress and completed work of assigned employees and contractors for accuracy, proper work methods, techniques, and compliance with applicable standards and specifications.
- Participates in the design, engineering, construction, and field inspection processes for Capital Improvement Program and maintenance projects to ensure contractors' compliance with District standards and regulatory requirements; attends pre-construction meetings; performs detailed plan checks of construction and design to ensure adherence to established policy and sound engineering practices.
- Plans, prioritizes, and schedules long-range capital improvement and maintenance projects in coordination with other supervisory staff and management.
- Supervises a variety of scheduled and emergency operations, maintenance, and repair activities of water distribution and storage systems and District facilities, including Supervisory Control and Data Acquisition System, pump stations, regulators, generators, wells, tanks, and other related facilities.
- Supervises water quality and sampling program; reviews results and reports; recommends system adjustments as necessary to ensure compliance with water quality standards.
- Oversees plan review for new construction and remodels by reviewing applicant's plans for compliance with state codes and District standards.
- Supervises the inspection, installation, and repair of automated meter reading/infrastructure (AMR/AMI) water meters.
- Supervises the implementation of the District's hydrant maintenance and valve turning programs.
- Administers backflow and cross-connection inspection programs.
- Administers the District's asset management program, including creating and maintaining maps utilizing Geographic Information System; receives and reviews leak reports, determines maintenance needs and costs, and estimates water loss; participates in developing and scheduling maintenance plans.
- Conducts research and analysis related to water use, supply, and demand; analyzes trends in population, demographics, and water usage, supply, and demand to forecast and anticipate current and future needs; develops recommendations to meet water needs; writes technical reports.
- Provides staff assistance to the Operations Manager by preparing and maintaining a variety of construction, maintenance, and repair reports, records, and files; ensures the proper documentation of activities.
- Meets and confers with contractors, engineers, developers, architects, a variety of outside agencies, and the general public on water distribution and storage systems and infrastructure construction, operation, maintenance, and repair issues and projects.
- Stays current on the status of new and pending regulatory legislation; recommends changes to current policies and procedures in order to comply with changes in legislation; maintains current on new technology by meeting with vendors as needed.
- Assists operations and maintenance staff in emergency or relief situations.
- Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Principles and practices of employee supervision, including work planning, assignment review and evaluation, discipline, and the training of staff in work procedures.

- Principles and practices of water distribution and storage systems operations and maintenance program development and administration.
- Principles, practices, equipment, tools, and materials of water distribution and storage systems operations and maintenance.
- Principles and practices of administering and maintaining an asset management program.
- Applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Principles and practices of budget and capital improvement program development, administration, and accountability.
- Principles and practices of contract administration and evaluation.
- Occupational hazards and safety principles, practices, and procedures of water distribution systems and infrastructure, including related equipment and hazardous materials.
- Modern office practices, methods, and computer equipment and applications.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Assist in developing and implementing goals, objectives, practices, policies, procedures, and work standards.
- Supervise, train, plan, organize, schedule, assign, review, and evaluate the work of staff.
- Organize, implement, and direct water distribution and storage systems operations and maintenance, backflow and cross-connection, AMI/AMR, and asset management programs.
- Interpret, apply, explain, and ensure compliance with applicable federal, state, and local policies, procedures, laws, and regulations.
- Understand, interpret, and successfully communicate both orally and in writing, pertinent department policies and procedures.
- Identify problems, research and analyze relevant information, and develop and present recommendations and justification for solution.
- Perform the most complex water production and distribution system operations and maintenance duties, and operate related equipment safely and effectively.
- Research, analyze, and evaluate new service delivery methods, procedures, and techniques.
- Prepare clear and concise reports, correspondence, procedures, and other written materials.
- Establish and maintain a variety of manual and computerized files, recordkeeping, and project management systems.
- Read, interpret, retrieve, and produce drawings, blueprints, maps, and specifications.
- Make sound, independent decisions within established policy and procedural guidelines.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment, including computer equipment and software programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Understand, and adhere to established District standards, policies, and procedures.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to the completion of the twelfth (12th) grade and seven (7) years of increasingly responsible experience in construction, maintenance, and repair of water utilities infrastructure and/or operation, maintenance, and repair of water production systems and related facilities, including four (4) years of lead or supervisory experience.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid California Driver's License by time of appointment.
- Possession of a valid Grade III or higher Water Distribution Operator Certificate issued by the California Department of Public Health (CDPH).
- Possession of, or ability to obtain a valid Grade I Water Treatment Operator Certificate issued by the CDPH within 18 months of employment.
- If assigned to backflow prevention program, possession of a Backflow Device Tester Certificate issued by the American Water Works Association (AWWA).
- If assigned to cross-connection program, possession of a Cross-Connection Specialist Certificate issued by AWWA.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, and to work in the field; strength, stamina, and mobility to perform light to medium physical work, to work in confined spaces, around machines, to climb and descend ladders, to operate varied hand and power tools and equipment, and to operate a motor vehicle to visit various District and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio. The job involves frequent walking in operational areas to identify problems or hazards and to conduct field inspections of projects and work sites. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate above-mentioned tools and equipment. Positions in this classification bend, stoop, kneel, reach, and climb to perform work in and inspect work sites. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 80 pounds, or heavier weights with the use of proper equipment.

ENVIRONMENTAL ELEMENTS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to potentially hazardous physical substances. Employees also work in the field and are exposed to cold and hot temperatures, inclement weather conditions, road hazards, loud noise levels, vibration, confining workspaces, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff, public and private representatives, and/or contractors in interpreting and enforcing District policies and procedures.

WORKING CONDITIONS

Required to be on-call and to work various shifts or emergencies during evenings, weekends, and/or holidays.

OPERATIONS MANAGER

DEFINITION

Under general direction, plans, organizes, manages, and reviews the work of staff responsible for the installation, maintenance, and repair of the District's water distribution system and infrastructure and the operation, control, and maintenance of the District's water production systems and facilities; manages the District's Capital Improvement Program, including long- and short-term project planning and overseeing the design, construction, maintenance, and operations of water production and distribution systems, facilities, and infrastructure; ensures compliance with water quality and regulatory requirements; provides responsible and complex support to the General Manager in areas of expertise; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general direction from the General Manager. Exercises direction and supervision over operations and maintenance staff through subordinate levels of supervision.

CLASS CHARACTERISTICS

This is a management classification responsible for planning, organizing, reviewing, and evaluating the operations and maintenance of District water distribution and storage systems, facilities, and related infrastructure. Responsibilities include developing and implementing policies and procedures for assigned programs, budget administration and reporting, regulatory compliance, and program evaluation. Incumbents serve as a professional resource for organizational, managerial, and operational analyses and studies. Responsibilities include coordinating the activities of the department with those of other departments and outside agencies, and managing and overseeing the complex and varied functions of the department. The incumbent is accountable for accomplishing departmental planning and operational goals and objectives, and for furthering District goals and objectives within general policy guidelines.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Assumes managerial responsibility for all projects, programs, and activities of the Operations Department, including the operations, maintenance, and repair of the District's water distribution and storage systems, related infrastructure, and District facilities and fleet.
- Directs and participates in the development and implementation of goals, objectives, policies, and priorities for the department; recommends, within District policy, appropriate service and staffing levels; recommends and administers policies and procedures.
- Selects, trains, motivates, and directs department personnel; evaluates and reviews work for acceptability and conformance with District standards, including program and project priorities and

performance evaluations; provides or coordinates staff training; works with employees to correct deficiencies; implements discipline and termination procedures; responds to staff questions and concerns.

- Manages and administers the department's budget; directs the forecast of additional funds needed for staffing, equipment, and supplies; directs the monitoring of and approves expenditures; directs the preparation and implementation of budgetary adjustments.
- Contributes to the overall quality of the District's service by continuously monitoring and evaluating the efficiency and effectiveness of service delivery methods and procedures; assesses and monitors the distribution of work, support systems, and internal reporting relationships; identifies opportunities for improvement; directs the implementation of change.
- Recommends and administers procedure guidelines and design standards while ensuring that water quality, operational, financial, regulatory, and legal requirements are met.
- Oversees the development of consultant requests for proposal for professional and/or construction services and the advertising and bid processes; evaluates proposals and recommends project award; administers contracts after award.
- Manages the District's Capital Improvement Program, including the planning, prioritization, and scheduling of long-term capital improvement and short-term maintenance projects in coordination with the Operations Supervisors and General Manager.
- Participates in the design, engineering, construction, and field inspection processes for District projects and private developments to ensure contractors' and developers' compliance with District standards and regulatory requirements; attends pre-construction meetings; performs detailed plan checks of construction and design to ensure adherence to established policy and sound engineering practices.
- Meets and confers with contractors, engineers, developers, architects, a variety of outside agencies, and the general public in acquiring information and coordinating water production and distribution operations and maintenance projects, programs, and services; provides information regarding District requirements.
- Manages the development and implementation of various operations and maintenance programs, including safety, loss prevention, water quality, emergency preparedness and response, environmental compliance, and asset management programs.
- Provides highly complex staff assistance to the General Manager; develops and reviews staff, operations, and regulatory reports related to assigned activities and services; presents information to the Board of Directors and other external councils, commissions, committees, and boards; performs a variety of public relations and outreach work related to assigned activities.
- Conducts a variety of organizational studies, investigations, and operational studies; recommends modifications to water production and distribution operations and maintenance programs, policies, and procedures.
- Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of water production and distribution operations and maintenance; researches emerging products and enhancements and their applicability to meet District needs.
- Monitors changes in regulations and technology that may affect District operations; implements policy and procedural changes after approval.
- Receives, investigates, and responds to difficult and sensitive problems and complaints in a professional manner; identifies and reports findings and takes necessary corrective action.
- Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Administrative principles and practices, including goal setting, program development, implementation, evaluation, and project management.
- Principles and practices of capital improvement program, budget, and contract development and administration.
- Principles and practices of employee supervision, either directly or through subordinate levels of supervision, including work planning, assignment review and evaluation, and the training of staff in work procedures.
- Organization and management practices as applied to the development, analysis, and evaluation of programs, policies, and operational needs of the assigned functional area.
- Principles and practices of water distribution and storage systems operations and maintenance program development and administration.
- Applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Practices of researching operations and maintenance issues, evaluating alternatives, making sound recommendations, and preparing and presenting effective staff reports.
- General principles of risk management related to the functions of the assigned area.
- Technical, legal, financial, and public relations problems associated with the management of water production and distribution operations and maintenance projects and programs.
- Modern office practices, methods, and computer equipment and applications.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for effectively representing the District in contacts with government agencies; community groups; and various business, professional, regulatory, and legislative organizations.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Recommend and implement goals, objectives, and practices for providing effective and efficient services.
- Administer complex and technical operations, maintenance, and related programs in an independent and cooperative manner.
- Plan, organize, assign, review, and evaluate the work of staff; train staff in work procedures.
- Prepare and administer large and complex budgets; allocate limited resources in a cost-effective manner.
- Evaluate and develop improvements in operations, procedures, policies, or methods.
- Analyze, interpret, summarize, and present administrative and technical information and data in an effective manner.
- Interpret, apply, explain, and ensure compliance with federal, state, and local policies, procedures, laws, and regulations.
- Conduct complex research projects, evaluate alternatives, make sound recommendations, and prepare effective technical staff reports.
- Effectively represent the District in meetings with governmental agencies; community groups; various businesses, professional, and regulatory organizations; and in meetings with individuals.
- Research, analyze, and evaluate new service delivery methods, procedures, and techniques.

- Prepare clear and concise reports, correspondence, procedures, and other written materials.
- Oversee the development and maintenance of a variety of manual and computerized files, recordkeeping, and project management systems.
- Read, interpret, retrieve, and produce drawings, blueprints, maps, and specifications.
- Make sound, independent decisions within established policy and procedural guidelines.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment, including computer equipment and software programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Understand, and adhere to established District standards, policies, and procedures.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to graduation from an accredited four-year college or university with major coursework in civil or environmental engineering, business or public administration, or a related field, and five (5) years of increasingly responsible experience managing and/or supervising water distribution and production operations and maintenance or a related field.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid California Driver’s License by time of appointment.
- Possession of a valid Grade III or higher Water Distribution Operator Certificate issued by the California Department of Public Health (CDPH) is preferred.
- Possession of a valid Grade III or higher Water Treatment Operator Certificate issued by the CDPH is preferred.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, and to work in the field; strength, stamina, and mobility to perform light physical work, to work in confined spaces, around machines, to climb and descend ladders, and to operate a motor vehicle to visit various District and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio. The job involves walking in operational areas to identify problems or hazards and to conduct field inspections of projects and work sites. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate tools and equipment. Positions in this classification bend, stoop, kneel, reach, and climb to perform work in and inspect work sites. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 25 pounds.

ENVIRONMENTAL ELEMENTS

Employees work primarily in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to potentially hazardous physical substances. Employees also work in the field and are exposed to cold and hot temperatures, inclement weather conditions, road hazards, loud noise levels, vibration, confining workspaces, chemicals, mechanical and/or electrical hazards, and

hazardous physical substances and fumes. Employees may interact with upset staff, public and private representatives, and/or contractors in interpreting and enforcing District policies and procedures.

WATER SYSTEM OPERATOR

DEFINITION

Under general supervision, performs a variety of work in the installation, maintenance, and repair of the District's water distribution system and infrastructure; operates, controls, and maintains the District's water production systems and facilities; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Field Operations Supervisor. Exercises no supervision over staff. May provide technical and functional direction and training to assigned staff as needed.

CLASS CHARACTERISTICS

This is a journey-level class responsible for performing the full range of technical duties required to ensure that the District's infrastructure, systems, and facilities are maintained in a safe and effective working condition. Responsibilities include inspecting and attending to assigned areas in a timely manner, and performing a wide variety of tasks in the operation, maintenance, and repair of assigned facilities and systems. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit. This class is distinguished from Lead Operator in that the latter is responsible for providing technical and functional direction to lower-level operations staff and for performing the most complex operations and maintenance duties assigned.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Performs construction, maintenance, and repair activities of District water utilities systems and infrastructure, including fire hydrants, pipelines, water production facilities and related pumping equipment, residential and commercial water meters, valve cans, meter boxes, water distribution valves, wells, and related facilities.
- Performs water meter maintenance, including installing new meters, testing and repairing meters of various sizes, locating and repairing leaks, and replacing meters as necessary; installs service lines and accounts for the installation of new or replacement meters.
- Flushes water mains to ensure water quality meets California State Water Resources Control Board standards.
- Repairs concrete after water distribution system maintenance, including sidewalk panels, structural foundations, and temporary and final street patches.
- Uses valve-turning equipment to isolate and shut down pre-designated water lines for routine maintenance and in emergency situations; ensures proper shut-down of services by utilizing sounding equipment and flow rates; provides explanations to the public during shut-downs.

- Installs, maintains, flushes, and repairs fire hydrants.
- Utilizes Supervisory Control and Data Acquisition System to ensure efficient operation of the water treatment and distribution systems including wells, water storage tanks, pump stations, and hydrants.
- Observes variations in operating conditions by interpreting meter, gauge, graph readings, and tests results to determine pressure and flow requirements to meet demand.
- Prepares and maintains detailed logs, records, and reports on a variety of water production system operations, tests, system maintenance performed, operating conditions, and inspection results.
- Performs maintenance and repair of treatment water system facilities and equipment such as pumps, motors, valves, storage tanks, cathodic protection test stations, anodes, rectifiers, backup generators, and related equipment.
- Takes samples from sampling stations located throughout the District's service area to measure system performance and to ensure compliance with water quality standards; delivers samples for further testing and analysis; maintains records.
- Receives and responds to service calls and customer complaints regarding issues such as leaks, high or low pressure, consumption levels, and water quality; turns water service on and off; resolves or refers issues to supervisor.
- Monitors contractors working with and around underground services to ensure the work is appropriately performed to District standards and meet regulatory requirements; coordinates work with other utilities service providers; addresses discrepancies as necessary.
- Performs grounds maintenance such as mowing, weed abatement, and picking up trash and debris in and around pump stations, wells, tanks, and other District facilities.
- Reads and interprets maps and diagrams in the performance of the work.
- Observes safe work methods and makes appropriate use of related safety equipment as required.
- Operates and maintains light, medium, and heavy-duty equipment such as backhoes, skip loaders, dump trucks, forklifts, and other equipment appropriate to the functional area of assignment.
- Operates a variety of hand and power tools and equipment related to work assignment as instructed.
- Maintains work areas in a clean and orderly condition, including securing equipment at the close of the workday.
- Installs street barricades and cones, and controls traffic around work sites to ensure safe conditions for the general public and District staff.
- Inspects assigned District infrastructure for safety issues, structural integrity, and possible future work projects and programs; appropriately marks areas that need to be repaired.
- Notifies assigned supervisor of the need for repair or additional maintenance as found during routine inspection and cleaning activities; prepares work orders or notes service requirements.
- Provides needed information and demonstrations concerning how to perform certain work tasks to new employees in the same or similar class of positions.
- May provide technical and functional direction to staff in the absence of a Lead Operator and Operations Supervisor.
- Maintains accurate logs and records of work performed and materials and equipment used.
- Attends training, meetings, workshops, etc., as required to enhance job knowledge and skills.
- Responds to after-hours emergencies and assists other staff as needed in emergency or relief situations.
- Performs on-call, stand by duty on a regular basis.
- Performs related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Principles, practices, tools, and equipment required to operate and control water distribution and production systems and facilities.
- Maintenance principles, practices, tools, and materials for maintaining and repairing water distribution systems and infrastructure.
- Basic mechanical, electrical, and hydraulic principles.
- The operation and minor maintenance of a variety of hand and power tools, vehicles, and light to heavy power equipment.
- Occupational hazards and safety equipment and practices related to the work such as handling chemicals and working in and around confined spaces.
- Applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Traffic control procedures and traffic sign regulations.
- Principles and procedures of recordkeeping and reporting.
- Basic arithmetic.
- Safe driving rules and practices.
- Basic computer equipment and applications related to the work.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Operate, control, maintain, and repair water production systems and related infrastructure, facilities, and appurtenances similar to those at the District.
- Troubleshoot maintenance problems and determine materials and supplies required for repair.
- Safely and effectively use and operate hand and power tools, mechanical equipment, and light to heavy equipment required for the work.
- Understand, apply, and ensure compliance with applicable federal, state, and local laws and regulations, and District policies and procedures.
- Make accurate arithmetic calculations.
- Set up and operate traffic area construction zones, including cones, barricades, and flagging.
- Read, interpret, and apply technical information from manuals, drawings, specifications, layouts, blueprints, and schematics.
- Follow department policies and procedures related to assigned duties.
- Maintain accurate logs and basic written records of work performed.
- Understand and follow oral and written instructions.
- Organize own work, set priorities, and meet critical time deadlines.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural, guidelines.
- Understand, and adhere to established District standards, policies, and procedures.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to the completion of the twelfth (12th) grade and five (5) years of experience in the construction, maintenance, and repair of water utilities infrastructure, and/or operation, maintenance, and repair of water production systems and related facilities.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid California Driver's License by time of appointment.
- Possession of a valid Grade II or higher Water Distribution Operator Certificate issued by the California Department of Public Health.

PHYSICAL DEMANDS

Must possess mobility to work in the field; strength, stamina, and mobility to perform medium to heavy physical work, to work in confined spaces and around machines, to climb and descend ladders, to operate varied hand and power tools and construction equipment, and to operate a motor vehicle to visit various District sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate above-mentioned tools and equipment. Positions in this classification bend, stoop, kneel, reach, and climb to perform work and inspect work sites. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 80 pounds, or heavier weights with the use of proper equipment.

ENVIRONMENTAL ELEMENTS

Employees work in the field and are exposed to cold and hot temperatures, inclement weather conditions, road hazards, loud noise levels, vibration, confining workspaces, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff, public and private representatives, and/or contractors in interpreting and enforcing District policies and procedures.

WORKING CONDITIONS

Required to be on-call and to work various shifts or emergencies during evenings, weekends, and/or holidays.



Appendix II

Recommended Position Allocations

Appendix II
Mid-Peninsula Water District
Classification Allocation Recommendations
November 2017

Current Title	Proposed Title	Recommendation	Department	Supervisor Title
Administrative Assistant	Administrative Assistant	No Change	Administration	Administrative Services Manager
Administrative Services Manager	Administrative Services Manager	No Change	Administration	General Manager
Administrative Specialist	Administrative Specialist	No Change	Administration	Administrative Services Manager
Administrative Specialist	Administrative Specialist	No Change	Administration	Administrative Services Manager
Field Operations Supervisor	Operations Supervisor	Title Change	Operations	Operations Manager
Field Operations Supervisor	Operations Supervisor	Title Change	Operations	Operations Manager
Field Operations Supervisor	Operations Supervisor	Title Change	Operations	Operations Manager
General Manager	General Manager	No Change		
Lead Operator	Lead Operator	No Change	Operations	Operations Manager
Lead Operator (Water Quality)	Lead Operator	No Change	Operations	Operations Manager
Maintenance Technician	Maintenance Technician	No Change	Operations	Field Operations Supervisor
Maintenance Technician	Maintenance Technician	No Change	Operations	Field Operations Supervisor
Maintenance Technician	Maintenance Technician	No Change	Customer Service	Field Operations Supervisor
Operations Manager	Operations Manager	No Change	Operations	General Manager
Water System Operator	Water System Operator	No Change	Operations	Field Operations Supervisor
Water System Operator	Water System Operator	No Change	Operations	Field Operations Supervisor
Water System Operator	Water System Operator	No Change	Operations	Field Operations Supervisor
Water System Operator	Water System Operator	No Change	Operations	Field Operations Supervisor
N/A	Accountant	New Classification	Administration	



AGENDA ITEM NO. 8.B.

DATE: November 15, 2017
TO: Board of Directors
FROM: Tammy Rudock, General Manager

SUBJECT: REVIEW MPWD PARS OPEB TRUST ACCOUNT INVESTMENT STRUCTURE AND PERFORMANCE, AND CONSIDER RESOLUTION 2017-21 APPROVING 2018 INVESTMENT PORTFOLIO

RECOMMENDATION

Receive program overview of the PARS (Public Agency Retirement Services) OPEB (Other Post-Employment Benefits) trust account, investment structure, and performance, and approve Resolution 2017-21 approving the 2018 investment portfolio.

FISCAL IMPACT

The investment strategy initially selected on May 16, 2011 for the MPWD PARS OPEB trust account was the Moderately Conservative HighMark PLUS. The investment objective was to “provide current income with moderate capital appreciation.” Approximately 15%-20% of public agencies participating in PARS OPEB plans have selected the Moderately Conservative portfolio. Returns as of December 31, 2016, in the Moderately Conservative portfolio were:

1-Year Returns	4.93%
3-Year Returns	3.20%
5-Year Returns	5.51%

The MPWD OPEB plan’s ROI (return on investment) target is 5.5%, as recommended by the MPWD GASB 45 actuarial report dated July 23, 2016.

Since 2011, the Board has reviewed the program annually and confirmed the retention of the Moderately Conservative HighMark PLUS investment strategy for the trust account.

Summary of MPWD’s OPEB plan as of September 30, 2017:

Initial Contribution (August 2011)	\$ 81,159
Additional Contributions	\$657,926
Total Contributions	\$739,085
Disbursements	\$ -0-
Total Investment Earnings	\$146,198
Account Balance	\$879,082

An overview of the MPWD’s OPEB plan summaries since September 30, 2014, is attached.

The Moderately Conservative HighMark PLUS Asset Allocation targets for the MPWD in 2017 included:

- 30.40% equity (stocks);
- 66.30% fixed income (bonds); and
- 3.31% cash.

Staff monitors the trust account performance on a monthly basis (as does the PARS OPEB investment team) and believes the current MPWD investment goals are being achieved.

Staff recently discovered an error in the funding contributions made in FY 2015/2016 (difference \$40,895) and FY 2016/2017 (difference \$38,241) that will be recommended during the mid-year budget review (total \$79,136). This will keep the MPWD’s plan on course with the “Constant Percentage Increase” funding option, plus the “pay-go” premiums for retirees, which are outlined within the MPWD GASB 45 Actuarial report dated July 23, 2016 (pages 5-6 from that report describing the funding alternatives are attached for reference).

BACKGROUND

On August 25, 2016, the Board received the GASB 45 Valuation as of July 1, 2015 prepared by Demsey Filliger & Associates (DFA) and dated July 23, 2016. (An actuarial valuation is now required every two years, and the next one is due by FYE June 30, 2018.)

DFA determined the amount of actuarial accrued liability for the MPWD-paid retiree healthcare benefits was \$2,452,610 as of July 1, 2015.

The DFA report included a 5.5% ROI.

SUMMARY OF DFA ACTUARIAL RESULTS

Active Participants: 18
 Retirees: 4
 Total Plan Members: 22
 Active Average Age: 48.78
 Average Service Years: 12.39
 Retiree Average Age: 75

ACTUARIAL RESULTS	07/01/15 @ 5.5% ROI DFA Valuation	12/26/13 @ 5.9% ROI (for comparison)	09/19/13 @ 7% ROI (for comparison)
Present Value of Future Benefits	\$3,627,044	\$2,344,400	\$2,226,500
Actuarial Accrued Liability (AAL)	\$2,452,610	\$1,807,700	\$1,517,700
Assets	\$ 432,917	\$ 257,000	\$ 257,000
Unfunded AAL	\$2,019,693	\$1,550,700	\$1,260,700
Amortization of Unfunded AAL	\$ 138,966	\$ 82,800	\$ 76,200
Normal Cost	\$ 120,462	\$ 63,800	\$ 48,200
Annual Required Contribution (ARC)	\$ 259,429	\$ 146,600	\$ 124,400

DISCUSSION

Staff met with the PARS OPEB investment team on November 6, 2017 and discussed the attached MPWD OPEB Client Review.

The MPWD’s OPEB Trust team consists of:

- PARS – Trust Administrator and Consultant;
- US Bank – Trustee; and
- HighMark Capital Investment – Investment Manager.

The team administers 1,600 plans for 850 public agencies and 400,000 participants.

Jennifer Meza, Supervisor/Client Services, from PARS will present a review of the MPWD OPEB Trust Account and progress as of September 30, 2017.

Andrew Brown, CFA, Senior Portfolio Manager, from HighMark Capital Management will report on the MPWD’s portfolio investment performance as of September 30, 2017.

The following HighMark Capital Management investment portfolio options are included in the attached PARS Client Review for the Board’s review and consideration:

- Conservative;
- Moderately Conservative;
- Moderate;
- Balanced; and
- Capital Appreciation.

Attachments: Resolution 2017-21
 MPWD PARS OPEB Plan Overview – 09/30/14 through 09/30/17
 Pages 5-6, “Funding Schedules” from the Demsey, Filliger & Associates MPWD GASB 45 Actuarial Report dated July 23, 2016
 OPEB Prefunding Trust Program Client Review by PARS dated November 15, 2017, including HighMark Capital Management PARS Investment Portfolio Options

BOARD ACTION: APPROVED:_____ DENIED:_____ POSTPONED:_____ STAFF DIRECTION:_____

UNANIMOUS _____ STUEBING _____ WARDEN _____ VELLA _____ LINVILL _____ ZUCCA _____

RESOLUTION NO. 2017-21

**APPROVING THE 2018 INVESTMENT PORTFOLIO
FOR THE MPWD PARS OPEB TRUST ACCOUNT**

* * *

MID-PENINSULA WATER DISTRICT

WHEREAS, the Mid-Peninsula Water District ("MPWD") initiated an OPEB (Other Post Employment Benefits) trust account with PARS (Public Agency Retirement Services) in August of 2011; and

WHEREAS, in 2011 the MPWD selected as its investment strategy the PARS Moderately Conservative HighMark PLUS portfolio; and

WHEREAS, each year since 2011, after review and consideration of its investment strategy and performance, the Board approved retention of the PARS Moderately Conservative HighMark PLUS investment portfolio for the MPWD OPEB trust account; and

WHEREAS, the MPWD PARS OPEB trust account investment strategy and performance was reviewed and considered by the Board of Directors at its regular meeting on November 15, 2017.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Mid-Peninsula Water District hereby approves the retention in 2018 of the PARS Moderately Conservative HighMark PLUS investment portfolio for the MPWD OPEB trust account.

REGULARLY PASSED AND ADOPTED this 15th day of November 2017, by the following vote:

AYES:

NOES:

ABSTENTIONS:

ABSENCES:

President, Board of Directors
Mid-Peninsula Water District

ATTEST:

District Secretary

MPWD PARS OPEB PLAN OVERVIEW

ACTION	AS OF 09/30/17	AS OF 09/30/16	AS OF 09/30/15	AS OF 09/30/14
ROI PROGRESS	For 12-month period the MPWD plan's net ROI was 6.52% The YTD performance was 7.47% Since MPWD plan's inception, net ROI: 5.80%	For 12-month period the MPWD plan's net ROI was 7.15% The YTD performance was 5.8% Since the MPWD plan's inception, net ROI: 5.65%	For 12-month period the MPWD plan's net ROI was .42% The YTD performance was -.94% Since the MPWD plan's inception, net ROI: 5.29%	For 12-month period the MPWD plan's net ROI was 5.85% The YTD (Year to Date—9 months—January 1 through September 30) performance was 2.96% Since the MPWD plan's inception (performance start date of 09/01/11), net ROI: 6.92%
INITIAL CONTRIBUTION	\$ 81,159	\$ 81,159	\$ 81,159	\$ 81,159
TOTAL ADDITIONAL CONTRIBUTIONS	\$657,926	\$503,256	\$304,422	\$247,497
TOTAL CONTRIBUTIONS	\$739,085	\$584,415	\$385,581	\$328,656
DISBURSEMENTS	\$ -0-	\$ -0-	\$ -0-	\$ -0-
TOTAL INVESTMENT EARNINGS	\$146,198	\$97,392	\$58,264	\$57,807
ACCOUNT BALANCE	\$879,082	\$677,462	\$440,908	\$384,538

Funding Schedules

There are many ways to approach the pre-funding of retiree healthcare benefits. In the *Financial Results* section, we determined the annual expense for all District-paid benefits. The expense is an orderly methodology, developed by the GASB, to account for retiree healthcare benefits. This amount will fluctuate from year to year based on the asset performance and as the population matures. However, the GASB 45 expense has no direct relation to amounts the District may set aside to pre-fund healthcare benefits.

The table on the next page provides the District with three alternative schedules for funding (as contrasted with expensing) retiree healthcare benefits. The schedules all assume that the retiree fund earns 5.5% per annum on its investments, a starting PARS trust balance of \$432,917 as of July 1, 2015, and that contributions and benefits are paid mid-year.

The schedules are:

1. A level contribution amount for the next 20 years.
2. A level percent of the Unfunded Accrued Liability.
3. A constant percentage (3%) increase for the next 20 years.

We provide these funding schedules to give the District a sense of the various alternatives available to it to pre-fund its retiree healthcare obligation. The three funding schedules are simply three different examples of how the District may choose to spread its costs.

By comparing the schedules, you can see the effect that early pre-funding has on the total amount the District will eventually have to pay. Because of investment earnings on fund assets, the earlier contributions are made, the less the District will have to pay in the long run. Of course, the advantages of pre-funding will have to be weighed against other uses of the money.

The table on the following page shows the required annual outlay under the pay-as-you-go method and each of the above schedules. **The three funding schedules include the "pay-as-you-go" costs; therefore, the amount of pre-funding is the excess over the "pay-as-you-go" amount.**

These numbers are computed on a closed group basis, assuming no new entrants, and using unadjusted premiums. We use unadjusted premiums for these funding schedules because we do not recommend that the District pre-fund for the full age-adjusted costs reflected in the GASB 45 liabilities shown in the first section of this report. If the District's premium structure changes in the future to explicitly charge under-age 65 retirees for the full actuarial cost of their benefits, this change will be offset by a lowering of the active employee rates (all else remaining equal), resulting in a direct reduction in District operating expenses on behalf of active employees from that point forward. For this reason among others, we believe that pre-funding of the full GASB liability would be redundant.

Mid-Peninsula Water District

Sample Funding Schedules (Closed Group)

Starting Trust Balance of \$432,917 as of July 1, 2015

Fiscal Year	Pay-as-you-go	Level Contribution for 20 years	Level % of Unfunded Liability	Constant Percentage Increase
2015	\$60,488	\$275,445	\$422,249	\$215,990
2016	67,502	275,445	368,783	222,470
2017	69,608	275,445	323,963	229,144
2018	77,062	275,445	286,154	236,018
2019	82,011	275,445	254,637	243,099
2020	88,753	275,445	228,291	250,392
2021	103,302	275,445	206,434	257,903
2022	112,254	275,445	188,824	265,641
2023	127,508	275,445	174,451	273,610
2024	141,525	275,445	163,145	281,818
2025	158,010	275,445	154,320	290,273
2026	172,969	275,445	147,676	298,981
2027	191,787	275,445	142,744	307,950
2028	209,420	275,445	139,393	317,189
2029	220,176	275,445	137,253	326,704
2030	240,532	275,445	135,755	336,506
2031	258,897	275,445	135,182	346,601
2032	278,065	275,445	135,223	356,999
2033	294,311	275,445	135,738	367,709
2034	310,279	275,445	136,456	378,740
2035	329,796	0	137,264	0
2036	339,899	0	138,204	0
2037	359,543	0	138,841	0
2038	376,209	0	139,488	0
2039	392,735	0	139,955	0
2040	404,219	0	140,185	0
2041	419,841	0	139,987	0
2042	432,674	0	139,476	0
2043	443,888	0	138,549	0
2044	453,287	0	137,159	0
2045	452,027	0	135,272	0
2046	454,140	0	132,684	0
2047	455,952	0	129,559	0
2048	454,407	0	125,945	0
2049	450,916	0	121,839	0
2050	445,462	0	117,277	0
2055	391,499	0	89,266	0
2060	307,758	0	55,880	0
2065	214,363	0	24,794	0
2070	127,557	0	11,016	0

Note to auditor: when calculating the employer OPEB contribution for the year ending on the statement date, we recommend multiplying the actual District-paid premiums on behalf of retirees by a factor of 1.2840 to adjust for the implicit subsidy.



MID-PENINSULA WATER DISTRICT

OPEB Prefunding Trust Program Client Review
November 15, 2017

CONTACTS



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Supervisor, Client Services



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ANDREW BROWN

Senior Portfolio Manager



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(415) 705-7605

OPEB/PENSION PROGRAM TEAM



Trust Administrator & Consultant	Trustee	Investment Manager
<ul style="list-style-type: none"> Recordkeeping/sub-trust accounting Actuarial coordination Monitor contributions/process disbursements Monitor plan compliance Ongoing client liaison 	<ul style="list-style-type: none"> Safeguard plan assets Oversight protection Plan fiduciary Custodian of assets 	<ul style="list-style-type: none"> Investment sub-advisor to U.S. Bank Open architecture Investment strategy and asset allocation development Investment policy assistance
Corporate Experience		
33 years (1984 – 2017)	154 years (1863 – 2017)	98 years (1919 – 2017)
Plans Under Administration		
1,600+ plans, 850+ public agencies, 400,000+ participants		
Dollars under Administration		
Over \$2.6 billion	Over \$4 trillion	Over \$15.9 billion under management

SUMMARY OF AGENCY'S OPEB PLAN

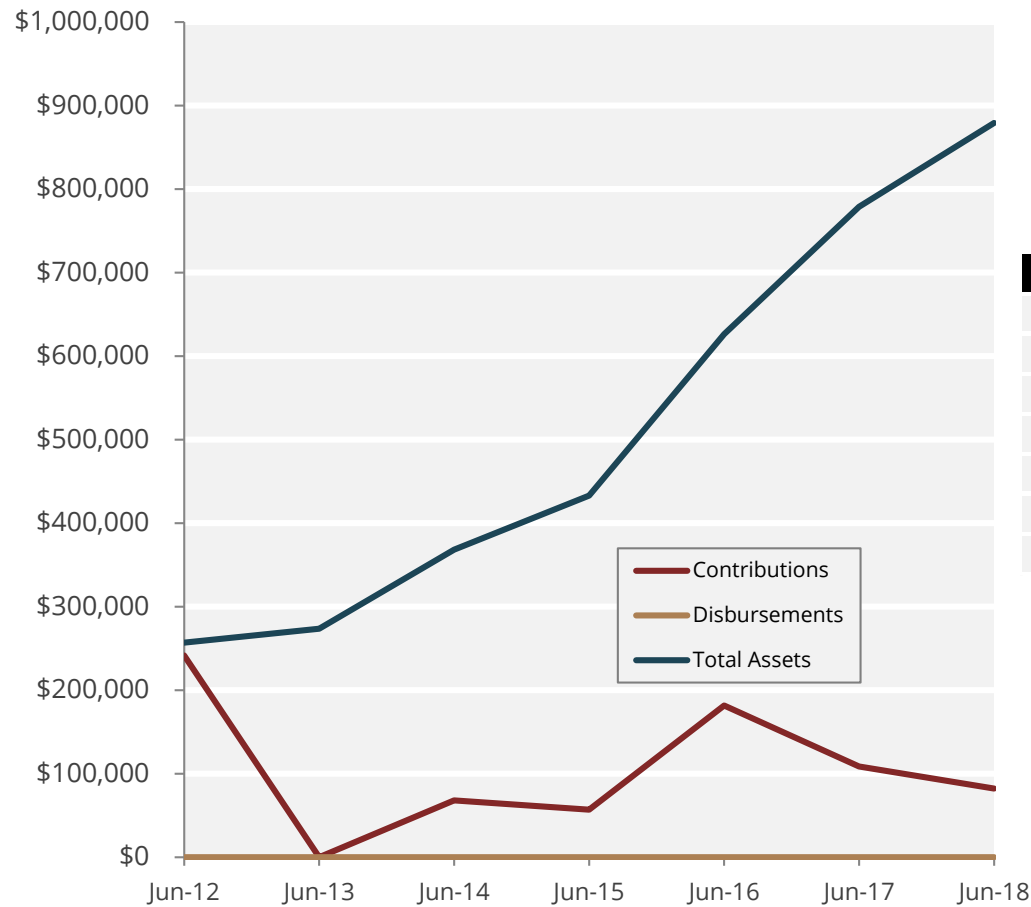
Plan Type:	IRC Section 115 Irrevocable Exclusive Benefit Trust
Trustee Approach:	Discretionary
Plan Effective Date:	April 28, 2011
Plan Administrator:	Candy Pina, District Secretary/Administrative Services Manager
Current Investment Strategy:	Moderately Conservative (Active) Strategy; Pooled Account

AS OF SEPTEMBER 30, 2017:

Initial Contribution:	August 2011 \$81,159
Additional Contributions:	\$657,926
Total Contributions:	\$739,085
Disbursements:	\$0.00
Total Investment Earnings:	\$146,198
Account Balance:	\$879,082

SUMMARY OF AGENCY'S OPEB PLAN

CONTRIBUTIONS, DISBURSEMENTS, AND TOTAL ASSETS AS OF SEPTEMBER 30, 2017:



Year	Contributions	Disbursements	Total Assets
Jun-12	\$241,627	\$0	\$257,032
Jun-13	\$0	\$0	\$273,541
Jun-14	\$68,054	\$0	\$368,264
Jun-15	\$56,925	\$0	\$432,917
Jun-16	\$181,575	\$0	\$626,357
Jun-17	\$108,702	\$0	\$778,799
Jun-18	\$82,201	\$0	\$879,082

Plan Year Ending

**Plan Year Ending June 2018 is based on 3 months of activity through September 30, 2017*

OPEB ACTUARIAL RESULTS

- We have received the actuarial report by Demsey Filliger & Associates, LLC with a valuation date as of July 1, 2015. In the table below, we have summarized the results.

Demographic Study Valuation Date: July 1, 2015	
Actives	18
Retirees	4
Total	22

OPEB ACTUARIAL RESULTS

Valuation Date: July 1, 2015	Prefunding Discount Rate: 5.50%
Present Value of Future Benefits (PVFB)	\$3,627,044
Actuarial Accrued Liability (AAL)	\$2,452,610
Actuarial Value of Assets	\$432,917
Unfunded Actuarial Accrued Liability (UAAL)	\$2,019,693

Rule of thumb: For every one percent increase in the discount rate, the unfunded liability is lowered by 10-12%.

HIGHMARK CAPITAL INVESTMENT REVIEW

PARS: Mid Peninsula Water District

Third Quarter 2017

**Presented by
Andrew Brown, CFA**

Selected Period Performance
PARS/PRHCP MOD CONSERV HM PLUS
Account 6746019203
Period Ending: 09/30/2017

Sector	3 Months	Year to Date (9 Months)	1 Year	3 Years	4 Years	Since Inception (73 Months)
Cash Equivalents	.22	.51	.58	.27	.21	.14
<i>Lipper Money Market Funds Index</i>	<i>.20</i>	<i>.44</i>	<i>.51</i>	<i>.19</i>	<i>.15</i>	<i>.10</i>
Total Fixed Income	1.03	3.84	1.26	2.72	2.94	3.10
<i>BC US Aggregate Bd Index</i>	<i>.85</i>	<i>3.14</i>	<i>.07</i>	<i>2.71</i>	<i>3.02</i>	<i>2.66</i>
Total Equities	5.33	16.95	19.86	9.16	9.94	12.34
Large Cap Funds	5.24	15.89	20.92	10.68	12.22	14.78
<i>S&P 500 Composite Index</i>	<i>4.48</i>	<i>14.24</i>	<i>18.61</i>	<i>10.81</i>	<i>12.98</i>	<i>15.11</i>
Mid Cap Funds	3.47	11.24	15.54	8.51	8.68	12.11
<i>Russell Midcap Index</i>	<i>3.47</i>	<i>11.74</i>	<i>15.32</i>	<i>9.54</i>	<i>11.08</i>	<i>14.28</i>
Small Cap Funds	5.62	15.75	21.22	12.77	11.42	15.95
<i>Russell 2000 Index</i>	<i>5.67</i>	<i>10.94</i>	<i>20.74</i>	<i>12.18</i>	<i>10.06</i>	<i>14.13</i>
International Equities	6.77	24.48	21.19	5.50	5.49	5.41
<i>MSCI EAFE Index</i>	<i>5.40</i>	<i>19.96</i>	<i>19.10</i>	<i>5.04</i>	<i>4.84</i>	<i>7.34</i>
<i>MSCI EM Free Index</i>	<i>7.89</i>	<i>27.78</i>	<i>22.46</i>	<i>4.90</i>	<i>4.75</i>	<i>3.25</i>
REIT Funds	.88	3.98	2.03			
<i>Wilshire REIT Index</i>	<i>.61</i>	<i>2.44</i>	<i>.10</i>	<i>9.65</i>	<i>10.60</i>	<i>10.69</i>
Total Managed Portfolio	2.29	7.47	6.52	4.66	4.96	5.80

Account Funded Date: 8/18/2011. Performance Start Date: 9/01/2011

Returns are gross of account level investment advisory fees and net of any fees, including fees to manage mutual fund or exchange traded fund holdings. Returns for periods over one year are annualized. The information presented has been obtained from sources believed to be accurate and reliable. Past performance is not indicative of future returns. Securities are not FDIC insured, have no bank guarantee, and may lose value.

ASSET ALLOCATION – Mid Peninsula Water District

As of September 30, 2017

Current Asset Allocation		Investment Vehicle	
Equity		Range: 20%-40%	30.40%
Large Cap Core	SMGIX	Columbia Contrarian Core CI Z	2.64%
	VGIAX	Vanguard Growth & Income Adm	6.17%
Large Cap Value	DODGX	Dodge & Cox Stock Fund	3.57%
Large Cap Growth	HNACX	Harbor Capital Appreciation Retirement	1.26%
	PRUFX	T. Rowe Price Growth Stock I	1.26%
Mid Cap Core	IWR	iShares Russell MidCap Index Fund	2.22%
Small Cap Value	UBVLX	Undiscovered Mgrs Behavioral Value Inst	2.28%
Small Cap Growth	PRJIX	T. Rowe Price New Horizons I	2.29%
International Core	NWHMX	Nationwide Bailard Intl Equities I	2.52%
International Value	DODFX	Dodge & Cox International Stock Fund	1.41%
International Growth	MGRDX	MFS® International Growth R6	1.41%
Emerging Markets	HHHYX	Hartford Schrodgers Emerging Mkts Eq Y	1.99%
Real Estate	VNQ	Vanguard REIT ETF	1.39%
Fixed Income		Range: 50%-80%	66.30%
Short-Term	VFSUX	Vanguard Short-Term Corp Adm Fund	10.18%
Intermediate-Term	NWJJX	Nationwide HM Bond Fund	22.27%
	PTTRX	PIMCO Total Return Instl Fund	15.39%
	PTRQX	Prudential Total Return Bond Fund Class Q	16.71%
Floating Rate Notes	EIFHX	Eaton Vance Floating-Rate and Hi Inc I	1.75%
Cash		Range: 0%-20%	3.31%
	FGZXX	First American Government Oblig Z	3.31%
TOTAL			100.00%

Mid Peninsula Water District

For Period Ending September 30, 2017

LARGE CAP EQUITY FUNDS							
Fund Name	1-Month Return	3-Month Return	Year-to- Date	1-Year Return	3-Year Return	5-Year Return	10-Year Return
Columbia Contrarian Core Z	1.48	4.17	15.51	17.67	10.61	14.76	9.25
Dodge & Cox Stock	4.00	4.76	11.89	23.88	9.83	15.65	6.59
Harbor Capital Appreciation Retirement	0.74	8.64	27.46	25.01	13.07	15.91	9.48
Vanguard Growth & Income Adm	2.24	4.89	13.21	17.81	10.74	14.40	6.90
T. Rowe Price Growth Stock I	0.24	5.48	26.14	26.28	14.03	16.34	9.20
S&P 500 TR USD	2.06	4.48	14.24	18.61	10.81	14.22	7.44
MID CAP EQUITY FUNDS							
Russell Mid Cap Value TR USD	2.73	2.14	7.43	13.37	9.19	14.33	7.85
iShares Russell Mid-Cap ETF	2.76	3.44	11.60	15.14	9.36	14.07	7.93
SMALL CAP EQUITY FUNDS							
Undiscovered Managers Behavioral Val L	6.46	4.54	7.47	16.28	11.89	15.70	10.02
T. Rowe Price New Horizons I	3.43	6.71	25.81	24.88	14.95	17.38	12.11
Russell 2000 TR USD	6.24	5.67	10.94	20.74	12.18	13.79	7.85
INTERNATIONAL EQUITY FUNDS							
Dodge & Cox International Stock	3.41	6.94	22.47	26.58	3.87	10.13	2.98
Nationwide Baidard Intl Eqs R6	0.92	5.79	20.15	16.71	5.50	8.81	1.42
MFS® International Growth Fund Class R6	1.93	4.87	25.20	18.25	8.13	8.13	3.62
MSCI EAFE NR USD	2.49	5.40	19.96	19.10	5.04	8.38	1.34
Hartford Schrodgers Emerging Mkts Eq Y	0.51	9.32	31.91	25.41	6.71	4.91	2.04
MSCI EM Free Index	-0.40	7.89	27.78	22.46	4.90	3.99	1.32

Source: SEI Investments, Morningstar Investments

Returns less than one year are not annualized. Past performance is no indication of future results. The information presented has been obtained from sources believed to be accurate and reliable. Securities are not FDIC insured, have no bank guarantee and may lose value.

Mid Peninsula Water District

For Period Ending September 30, 2017

REAL ESTATE FUNDS							
Fund Name	1-Month Return	3-Month Return	Year-to- Date	1-Year Return	3-Year Return	5-Year Return	10-Year Return
Vanguard REIT ETF	-0.11	0.90	3.51	0.43	9.54	9.48	6.02
BOND FUNDS							
Nationwide HighMark Bond Instl Svc	-0.37	0.73	2.88	0.29	2.56	2.19	4.61
PIMCO Total Return Instl	-0.27	1.50	5.01	2.43	3.22	2.43	5.63
Prudential Total Return Bond Q	-0.35	1.38	5.53	2.35	4.11	3.64	6.06
Vanguard Short-Term Investment-Grade Adm	-0.13	0.60	2.18	1.34	2.12	1.93	3.15
BBgBarc US Agg Bond TR USD	-0.48	0.85	3.14	0.07	2.71	2.06	4.27
Eaton Vance Floating-Rate & Hi Inc Inst	0.45	0.93	3.66	6.23	4.29	4.26	4.42

Source: SEI Investments, Morningstar Investments

Returns less than one year are not annualized. Past performance is no indication of future results. The information presented has been obtained from sources believed to be accurate and reliable. Securities are not FDIC insured, have no bank guarantee and may lose value.

PARS DIVERSIFIED PORTFOLIOS CONSERVATIVE

Q3 2017

WHY THE PARS DIVERSIFIED CONSERVATIVE PORTFOLIO?

Comprehensive Investment Solution

HighMark® Capital Management, Inc.'s (HighMark) diversified investment portfolios are designed to balance return expectations with risk tolerance. Key features include: sophisticated asset allocation and optimization techniques, four layers of diversification (asset class, style, manager, and security), access to rigorously screened, top tier money managers, flexible investment options, and experienced investment management.

Rigorous Manager Due Diligence

Our manager review committee utilizes a rigorous screening process that searches for investment managers and styles that have not only produced above-average returns within acceptable risk parameters, but have the resources and commitment to continue to deliver these results. We have set high standards for our investment managers and funds. This is a highly specialized, time consuming approach dedicated to one goal: competitive and consistent performance.

Flexible Investment Options

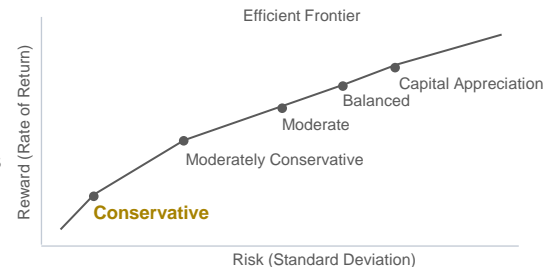
In order to meet the unique needs of our clients, we offer access to flexible implementation strategies: HighMark Plus utilizes actively managed mutual funds while Index Plus utilizes index-based securities, including exchange-traded funds. Both investment options leverage HighMark's active asset allocation approach.

Risk Management

The portfolio is constructed to control risk through four layers of diversification – asset classes (cash, fixed income, equity), investment styles (large cap, small cap, international, value, growth), managers and securities. Disciplined mutual fund selection and monitoring process helps to drive return potential while reducing portfolio risk.

INVESTMENT OBJECTIVE

To provide a consistent level of inflation-protected income over the long-term. The major portion of the assets will be fixed income related. Equity securities are utilized to provide inflation protection.



ASSET ALLOCATION — CONSERVATIVE PORTFOLIO

	Strategic Range	Policy	Tactical
Equity	5 – 20%	15%	15%
Fixed Income	60 – 95%	80%	79%
Cash	0 – 20%	5%	6%

ANNUALIZED TOTAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

HighMark Plus (Active)

Current Quarter*	1.60%
Blended Benchmark**	1.30%
Year To Date	5.50%
Blended Benchmark	4.19%
1 Year	3.88%
Blended Benchmark	3.04%
3 Year	3.69%
Blended Benchmark	3.34%
5 Year	3.71%
Blended Benchmark	3.36%
10 Year	4.29%
Blended Benchmark	3.80%

Index Plus (Passive)

Current Quarter*	1.27%
Blended Benchmark**	1.30%
Year To Date	4.39%
Blended Benchmark	4.19%
1 Year	2.71%
Blended Benchmark	3.04%
3 Year	3.13%
Blended Benchmark	3.34%
5 Year	3.30%
Blended Benchmark	3.36%
10 Year	3.74%
Blended Benchmark	3.80%

* Returns less than 1-year are not annualized. **Breakdown for Blended Benchmark: 7.5% S&P500, 1.5% Russell Mid Cap, 2.5% Russell 2000, 1% MSCI EM FREE, 2% MSCI EAFE, 52.25% BC US Agg, 25.75% ML 1-3 Yr US Corp/Govt, 2% US High Yield Master II, 0.5% Wilshire REIT, and 5% Citi 1 Mth T-Bill. Prior to October 2012, the blended benchmarks were 12% S&P 500; 1% Russell 2000, 2% MSCI EAFE, 40% ML 1-3 Year Corp./Govt, 40% BC Agg, 5% Citi 1 Mth T-Bill. Prior to April 2007, the blended benchmarks were 15% S&P 500, 40% ML 1-3Yr Corp/Govt, 40% BC Agg, and 5% Citi 1 Mth T-Bill.

ANNUAL RETURNS

HighMark Plus (Active)

2008	-9.04%
2009	15.59%
2010	8.68%
2011	2.19%
2012	8.45%
2013	3.69%
2014	3.88%
2015	0.29%
2016	4.18%

Index Plus (Passive)

2008	-6.70%
2009	10.49%
2010	7.67%
2011	3.70%
2012	6.22%
2013	3.40%
2014	4.32%
2015	0.06%
2016	3.75%

PORTFOLIO FACTS

HighMark Plus (Active)

Inception Date	07/2004
No of Funds in Portfolio	19

Index Plus (Passive)

Inception Date	07/2004
No of Funds in Portfolio	13

HOLDINGS

HighMark Plus (Active)

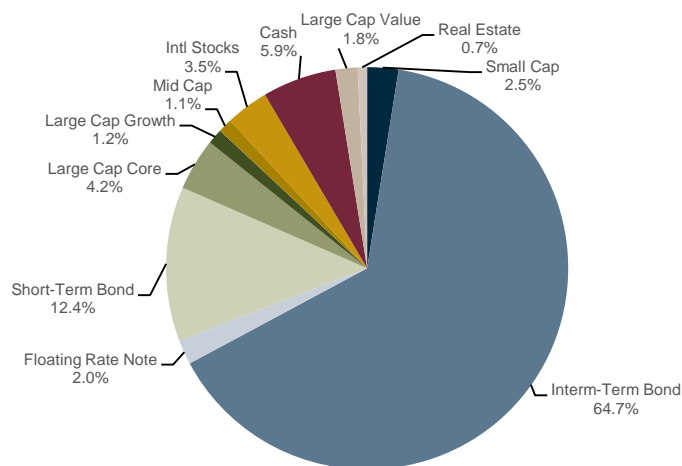
Columbia Contrarian Core Z
 Vanguard Growth & Income Adm
 Dodge & Cox Stock Fund
 Harbor Capital Appreciation
 T. Rowe Price Growth Stock
 iShares Russell Mid-Cap ETF
 Vanguard REIT ETF
 Undiscovered Managers Behavioral Value
 T. Rowe Price New Horizons
 Nationwide Baidard International Equities
 Dodge & Cox International Stock
 MFS International Growth I
 Hartford Schroders Emerging Markets Eq
 Vanguard Short-Term Invest-Grade Adm
 PIMCO Total Return
 Prudential Total Return
 Nationwide HighMark Bond
 Eaton Vance Floating Rate & High Income
 First American Government Obligations Z

Index Plus (Passive)

iShares Core S&P 500 ETF
 iShares S&P 500/Value
 iShares S&P 500/Growth
 iShares Russell Mid-Cap ETF
 Vanguard REIT ETF
 iShares Russell 2000 Value
 iShares Russell 2000 Growth
 iShares MSCI EAFE
 Vanguard FTSE Emerging Markets ETF
 Vanguard Short-Term Invest-Grade Adm
 iShares Core U.S. Aggregate
 PowerShares Senior Loan
 First American Government Obligations Z

Holdings are subject to change at the discretion of the investment manager.

STYLE



The performance records shown represent size-weighted composites of tax exempt accounts that meet the following criteria: US Bank may charge clients as much as 0.60% annual management fee based on a sliding scale. As of September 30, 2017, the blended rate is 0.58%. US Bank pays HighMark 60% of the annual management fee for assets sub-advised by HighMark under its sub-advisory agreement with US Bank. The 36 basis points paid to HighMark, as well as other expenses that may be incurred in the management of the portfolio, will reduce the portfolio returns. Assuming an investment for five years, a 5% annual total return, and an annual sub-advisory fee rate of 0.36% deducted from the assets at market at the end of each year, a 10 million initial value would grow to \$12.54 million after fees (Net-of-Fees) and \$12.76 million before fees (Gross-of-Fees). Additional information regarding the firm's policies and procedures for calculating and reporting performance results is available upon request. In Q1 2010, the PARS Composite definition was changed from \$750,000 minimum to no minimum. Performance results are calculated and presented in U.S. dollars and do not reflect the deduction of investment advisory fees, custody fees, or taxes but do reflect the deduction of trading expenses. Returns are calculated based on trade-date accounting.

Blended benchmarks represent HighMark's strategic allocations between equity, fixed income, and cash and are rebalanced monthly. Benchmark returns do not reflect the deduction of advisory fees or other expenses of investing but assumes the reinvestment of dividends and other earnings. An investor cannot invest directly in an index. The unmanaged S&P 500 Index is representative of the performance of large companies in the U.S. stock market. The MSCI EAFE Index is a free float-adjusted market capitalization index designed to measure developed market equity performance, excluding the U.S. and Canada. The MSCI Emerging Markets Free Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. The Russell Midcap Index measures the performance of the mid-cap segment of the U.S. equity universe. The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The US High Yield Master II Index tracks the performance of below investment grade U.S. dollar-denominated corporate bonds publicly issued in the U.S. domestic market. Wilshire REIT index measures U.S. publicly traded Real Estate Investment Trusts. The unmanaged Bloomberg Barclays Capital (BC) U.S. Aggregate Bond Index is generally representative of the U.S. taxable bond market as a whole. The Merrill Lynch (ML) 1-3 Year U.S. Corporate & Government Index tracks the bond performance of The ML U.S. Corporate & Government Index, with a remaining term to final maturity less than 3 years. The unmanaged Citigroup 1-Month Treasury Bill Index tracks the yield of the 1-month U.S. Treasury Bill.

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Asset Allocation Committee

Number of Members: 16
 Average Years of Experience: 26
 Average Tenure (Years): 13

Manager Review Group

Number of Members: 7
 Average Years of Experience: 20
 Average Tenure (Years): 7

PARS DIVERSIFIED PORTFOLIOS
MODERATELY CONSERVATIVE

Q3 2017

WHY THE PARS DIVERSIFIED MODERATELY CONSERVATIVE PORTFOLIO?

Comprehensive Investment Solution

HighMark® Capital Management, Inc.'s (HighMark) diversified investment portfolios are designed to balance return expectations with risk tolerance. Key features include: sophisticated asset allocation and optimization techniques, four layers of diversification (asset class, style, manager, and security), access to rigorously screened, top tier money managers, flexible investment options, and experienced investment management.

Rigorous Manager Due Diligence

Our manager review committee utilizes a rigorous screening process that searches for investment managers and styles that have not only produced above-average returns within acceptable risk parameters, but have the resources and commitment to continue to deliver these results. We have set high standards for our investment managers and funds. This is a highly specialized, time consuming approach dedicated to one goal: competitive and consistent performance.

Flexible Investment Options

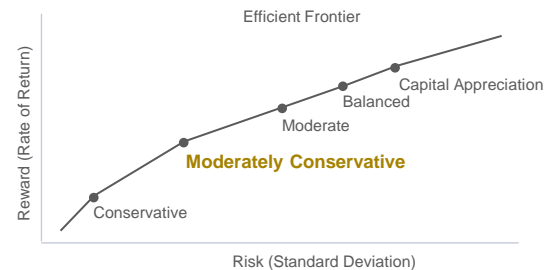
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Risk Management

The portfolio is constructed to control risk through four layers of diversification – asset classes (cash, fixed income, equity), investment styles (large cap, small cap, international, value, growth), managers and securities. Disciplined mutual fund selection and monitoring process helps to drive return potential while reducing portfolio risk.

INVESTMENT OBJECTIVE

To provide current income and moderate capital appreciation. The major portion of the assets is committed to income-producing securities. Market fluctuations should be expected.



ASSET ALLOCATION — MODERATELY CONSERVATIVE PORTFOLIO

	Strategic Range	Policy	Tactical
Equity	20 - 40%	30%	30%
Fixed Income	50 - 80%	65%	67%
Cash	0 - 20%	5%	3%

ANNUALIZED TOTAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

HighMark Plus (Active)		Index Plus (Passive)	
Current Quarter*	2.30%	Current Quarter*	1.90%
Blended Benchmark**	1.94%	Blended Benchmark**	1.94%
Year To Date	7.48%	Year To Date	6.14%
Blended Benchmark	6.13%	Blended Benchmark	6.13%
1 Year	6.51%	1 Year	5.23%
Blended Benchmark	5.58%	Blended Benchmark	5.58%
3 Year	4.67%	3 Year	4.36%
Blended Benchmark	4.61%	Blended Benchmark	4.61%
5 Year	5.14%	5 Year	4.86%
Blended Benchmark	5.06%	Blended Benchmark	5.06%
10 Year	4.77%	10 Year	4.23%
Blended Benchmark	4.52%	Blended Benchmark	4.52%

* Returns less than 1-year are not annualized. **Breakdown for Blended Benchmark: 15.5% S&P500, 3% Russell Mid Cap, 4.5% Russell 2000, 2% MSCI EM FREE, 4% MSCI EAFE, 49.25% BC US Agg, 14% ML 1-3 Yr US Corp/Gov't, 1.75% US High Yield Master II, 1% Wilshire REIT, and 5% Citi 1 Mth T-Bill. Prior to October 2012, the blended benchmarks were 25% S&P 500; 1.5% Russell 2000, 3.5% MSCI EAFE, 25% ML 1-3 Year Corp./Govt, 40% BC Agg, 5% Citi 1 Mth T-Bill. Prior to April 2007, the blended benchmarks were 30% S&P 500, 25% ML 1-3Yr Corp/Gov, 40% BC Agg, and 5% Citi 1 Mth T-Bill.

ANNUAL RETURNS

HighMark Plus (Active)		Index Plus (Passive)	
2008	-15.37%	2008	-12.40%
2009	18.71%	2009	11.92%
2010	10.46%	2010	9.72%
2011	1.75%	2011	3.24%
2012	10.88%	2012	8.24%
2013	7.30%	2013	6.78%
2014	4.41%	2014	5.40%
2015	0.32%	2015	-0.18%
2016	4.93%	2016	5.42%

PORTFOLIO FACTS

HighMark Plus (Active)		Index Plus (Passive)	
Inception Data	08/2004	Inception Data	05/2005
No of Funds in Portfolio	19	No of Funds in Portfolio	13

HOLDINGS

HighMark Plus (Active)

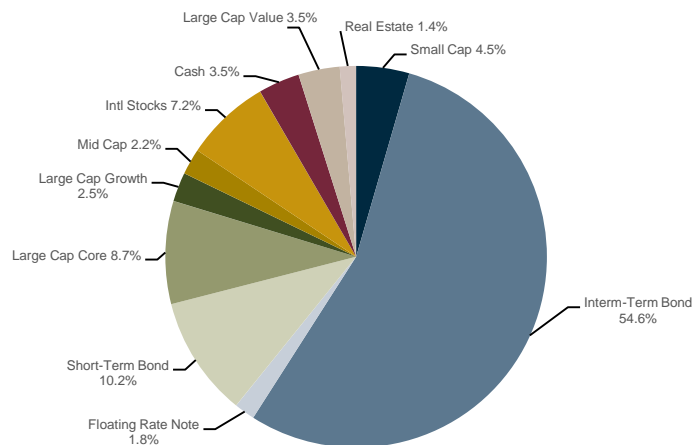
Columbia Contrarian Core Z
 Vanguard Growth & Income Adm
 Dodge & Cox Stock Fund
 Harbor Capital Appreciation
 T. Rowe Price Growth Stock
 iShares Russell Mid-Cap ETF
 Vanguard REIT ETF
 Undiscovered Managers Behavioral Value
 T. Rowe Price New Horizons
 Nationwide Bailard International Equities
 Dodge & Cox International Stock
 MFS International Growth I
 Hartford Schroders Emerging Markets Eq
 Vanguard Short-Term Invest-Grade Adm
 PIMCO Total Return
 Prudential Total Return
 Nationwide HighMark Bond
 Eaton Vance Floating Rate & High Income
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Index Plus (Passive)

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STYLE



The performance records shown represent size-weighted composites of tax exempt accounts that meet the following criteria: Composites are managed by HighMark's HighMark Capital Advisors (HCA) with full investment authority according to the PARS Moderately Conservative active and passive objectives and do not have equity concentration of 25% or more in one common stock security.

The adviser to the PARS portfolios is US Bank, and HighMark serves as sub-adviser to US Bank to manage these portfolios. US Bank may charge clients as much as 0.60% annual management fee based on a sliding scale. As of September 30, 2017, the blended rate is 0.58%. US Bank pays HighMark 60% of the annual management fee for assets sub-advised by HighMark under its sub-advisory agreement with US Bank. The 36 basis points paid to HighMark, as well as other expenses that may be incurred in the management of the portfolio, will reduce the portfolio returns. Assuming an investment for five years, a 5% annual total return, and an annual sub-advisory fee rate of 0.36% deducted from the assets at market at the end of each year, a 10 million initial value would grow to \$12.54 million after fees (Net-of-Fees) and \$12.76 million before fees (Gross-of-Fees). Additional information regarding the firm's policies and procedures for calculating and reporting performance results is available upon request. In Q1 2010, the PARS Composite definition was changed from \$750,000 minimum to no minimum. Performance results are calculated and presented in U.S. dollars and do not reflect the deduction of investment advisory fees, custody fees, or taxes but do reflect the deduction of trading expenses. Returns are calculated based on trade-date accounting.

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Asset Allocation Committee

Number of Members: 16
 Average Years of Experience: 26
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Manager Review Group

Number of Members: 7
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 Average Tenure (Years): 7

PARS DIVERSIFIED PORTFOLIOS
MODERATE

Q3 2017

WHY THE PARS DIVERSIFIED MODERATE PORTFOLIO?

Comprehensive Investment Solution

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Rigorous Manager Due Diligence

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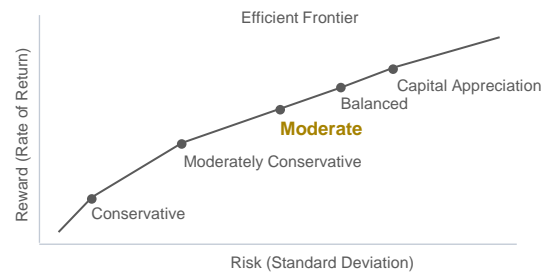
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Risk Management

The portfolio is constructed to control risk through four layers of diversification – asset classes (cash, fixed income, equity), investment styles (large cap, small cap, international, value, growth), managers and securities. Disciplined mutual fund selection and monitoring process helps to drive return potential while reducing portfolio risk.

INVESTMENT OBJECTIVE

To provide growth of principal and income. It is expected that dividend and interest income will comprise a significant portion of total return, although growth through capital appreciation is equally important.



ASSET ALLOCATION — MODERATE PORTFOLIO

	Strategic Range	Policy	Tactical
Equity	40 - 60%	50%	50%
Fixed Income	40 - 60%	45%	47%
Cash	0 - 20%	5%	3%

ANNUALIZED TOTAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

HighMark Plus (Active)		Index Plus (Passive)	
Current Quarter*	3.07%	Current Quarter*	2.73%
Blended Benchmark**	2.73%	Blended Benchmark**	2.73%
Year To Date	9.92%	Year To Date	8.48%
Blended Benchmark	8.45%	Blended Benchmark	8.45%
1 Year	10.14%	1 Year	8.95%
Blended Benchmark	9.15%	Blended Benchmark	9.15%
3 Year	6.00%	3 Year	5.72%
Blended Benchmark	6.15%	Blended Benchmark	6.15%
5 Year	7.03%	5 Year	6.88%
Blended Benchmark	7.27%	Blended Benchmark	7.27%
10 Year	5.07%	10 Year	5.08%
Blended Benchmark	5.21%	Blended Benchmark	5.21%

* Returns less than 1-year are not annualized. **Breakdown for Blended Benchmark: 26.5% S&P500, 5% Russell Mid Cap, 7.5% Russell 2000, 3.25% MSCI EM FREE, 6% MSCI EAFE, 33.50% BC US Agg, 10% ML 1-3 Yr US Corp/Gov't, 1.50% US High Yield Master II, 1.75% Wilshire REIT, and 5% Citi 1 Mth T-Bill. Prior to October 2012, the blended benchmarks were 43% S&P 500; 2% Russell 2000, 5% MSCI EAFE, 15% ML 1-3 Year Corp./Govt, 30% BC Agg, 5% Citi 1 Mth T-Bill. Prior to April 2007, the blended benchmarks were 50% S&P 500, 15% ML 1-3Yr Corp/Gov, 30% BC Agg, and 5% Citi 1 Mth T-Bill.

ANNUAL RETURNS

HighMark Plus (Active)		Index Plus (Passive)	
2008	-22.88%	2008	-18.14%
2009	21.47%	2009	16.05%
2010	12.42%	2010	11.77%
2011	0.55%	2011	2.29%
2012	12.25%	2012	10.91%
2013	13.06%	2013	12.79%
2014	4.84%	2014	5.72%
2015	0.14%	2015	-0.52%
2016	6.44%	2016	7.23%

PORTFOLIO FACTS

HighMark Plus (Active)		Index Plus (Passive)	
Inception Date	10/2004	Inception Date	05/2006
No of Funds in Portfolio	19	No of Funds in Portfolio	13

HOLDINGS

HighMark Plus (Active)

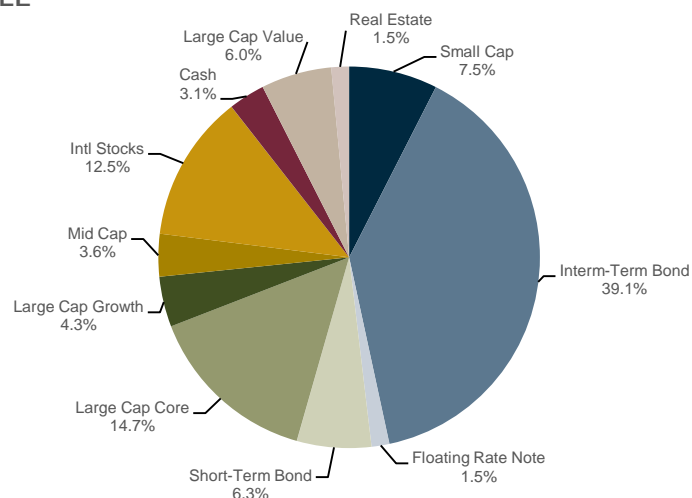
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PARS DIVERSIFIED PORTFOLIOS
BALANCED

Q3 2017

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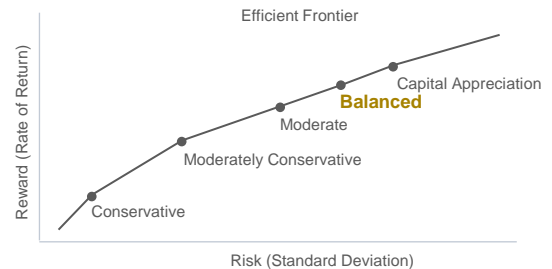
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The portfolio is constructed to control risk through four layers of diversification – asset classes (cash, fixed income, equity), investment styles (large cap, small cap, international, value, growth), managers and securities. Disciplined mutual fund selection and monitoring process helps to drive return potential while reducing portfolio risk.

INVESTMENT OBJECTIVE

To provide growth of principal and income. While dividend and interest income are an important component of the objective's total return, it is expected that capital appreciation will comprise a larger portion of the total return.



ASSET ALLOCATION — BALANCED PORTFOLIO

	Strategic Range	Policy	Tactical
Equity	50 – 70%	60%	60%
Fixed Income	30 – 50%	35%	37%
Cash	0 – 20%	5%	3%

ANNUALIZED TOTAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

HighMark Plus (Active)		Index Plus (Passive)	
Current Quarter*	3.62%	Current Quarter*	3.17%
Blended Benchmark**	3.15%	Blended Benchmark**	3.15%
Year To Date	11.57%	Year To Date	9.69%
Blended Benchmark	9.69%	Blended Benchmark	9.69%
1 Year	12.25%	1 Year	10.87%
Blended Benchmark	10.99%	Blended Benchmark	10.99%
3 Year	6.63%	3 Year	6.40%
Blended Benchmark	6.93%	Blended Benchmark	6.93%
5 Year	8.12%	5 Year	7.91%
Blended Benchmark	8.37%	Blended Benchmark	8.37%
10 Year	5.22%	10 Year	5.11%
Blended Benchmark	5.60%	Blended Benchmark	5.60%

* Returns less than 1-year are not annualized. **Breakdown for Blended Benchmark: 32% S&P500, 6% Russell Mid Cap, 9% Russell 2000, 4% MSCI EM FREE, 7% MSCI EAFE, 27% BC US Agg, 6.75% ML 1-3 Yr US Corp/Gov't, 1.25% US High Yield Master II, 2% Wilshire REIT, and 5% Citi 1 Mth T-Bill. Prior to October 2012, the blended benchmarks were 51% S&P 500; 3% Russell 2000, 6% MSCI EAFE, 5% ML 1-3 Year Corp./Gov't, 30% BC Agg, 5% Citi 1 Mth T-Bill. Prior to April 2007, the blended benchmarks were 60% S&P 500, 5% ML 1-3Yr Corp/Gov, 30% BC Agg, and 5% Citi 1 Mth T-Bill.

ANNUAL RETURNS

HighMark Plus (Active)		Index Plus (Passive)	
2008	-25.72%	2008	-23.22%
2009	21.36%	2009	17.62%
2010	14.11%	2010	12.76%
2011	-0.46%	2011	1.60%
2012	13.25%	2012	11.93%
2013	16.61%	2013	15.63%
2014	4.70%	2014	6.08%
2015	0.04%	2015	-0.81%
2016	6.82%	2016	8.26%

PORTFOLIO FACTS

HighMark Plus (Active)		Index Plus (Passive)	
Inception Data	10/2006	Inception Data	10/2007
No of Funds in Portfolio	19	No of Funds in Portfolio	13

HOLDINGS

HighMark Plus (Active)

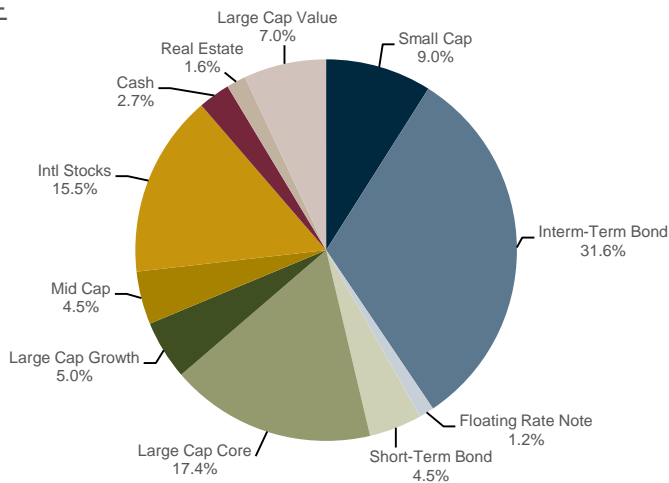
Columbia Contrarian Core Z
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 T. Rowe Price New Horizons
 Nationwide Bailard International Equities
 Dodge & Cox International Stock
 MFS International Growth I
 Hartford Schroders Emerging Markets Eq
 Vanguard Short-Term Invest-Grade Adm
 PIMCO Total Return
 Prudential Total Return
 Nationwide HighMark Bond
 Eaton Vance Floating Rate & High Income
 First American Government Obligations Z

Index Plus (Passive)

iShares Core S&P 500 ETF
 iShares S&P 500/Value
 iShares S&P 500/Growth
 iShares Russell Mid-Cap ETF
 Vanguard REIT ETF
 iShares Russell 2000 Value
 iShares Russell 2000 Growth
 iShares MSCI EAFE
 Vanguard FTSE Emerging Markets ETF
 Vanguard Short-Term Invest-Grade Adm
 iShares Core U.S. Aggregate
 PowerShares Senior Loan
 First American Government Obligations Z

Holdings are subject to change at the discretion of the investment manager.

STYLE



The performance records shown represent size-weighted composites of tax exempt accounts that meet the following criteria: Composites are managed by HighMark's HighMark Capital Advisors (HCA) with full investment authority according to the PARS Balanced active and passive objectives and do not have equity concentration of 25% or more in one common stock security.

The composite name has been changed from PARS Balanced/Moderately Aggressive to PARS Balanced on 5/1/2013. The adviser to the PARS portfolios is US Bank, and HighMark serves as sub-adviser to US Bank to manage these portfolios. US Bank may charge clients as much as 0.60% annual management fee based on a sliding scale. As of September 30, 2017, the blended rate is 0.58%. US Bank pays HighMark 60% of the annual management fee for assets sub-advised by HighMark under its sub-advisory agreement with US Bank. The 36 basis points paid to HighMark, as well as other expenses that may be incurred in the management of the portfolio, will reduce the portfolio returns. Assuming an investment for five years, a 5% annual total return, and an annual sub-advisory fee rate of 0.36% deducted from the assets at market at the end of each year, a 10 million initial value would grow to \$12.54 million after fees (Net-of-Fees) and \$12.76 million before fees (Gross-of-Fees). Additional information regarding the firm's policies and procedures for calculating and reporting performance results is available upon request. In Q1 2010, the PARS Composite definition was changed from \$750,000 minimum to no minimum. Performance results are calculated and presented in U.S. dollars and do not reflect the deduction of investment advisory fees, custody fees, or taxes but do reflect the deduction of trading expenses. Returns are calculated based on trade-date accounting.

Blended benchmarks represent HighMark's strategic allocations between equity, fixed income, and cash and are rebalanced monthly. Benchmark returns do not reflect the deduction of advisory fees or other expenses of investing but assumes the reinvestment of dividends and other earnings. An investor cannot invest directly in an index. The unmanaged S&P 500 Index is representative of the performance of large companies in the U.S. stock market. The MSCI EAFE Index is a free float-adjusted market capitalization index designed to measure developed market equity performance, excluding the U.S. and Canada. The MSCI Emerging Markets Free Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. The Russell Midcap Index measures the performance of the mid-cap segment of the U.S. equity universe. The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The US High Yield Master II Index tracks the performance of below investment grade U.S. dollar-denominated corporate bonds publicly issued in the U.S. domestic market. Wilshire REIT index measures U.S. publicly traded Real Estate Investment Trusts. The unmanaged Bloomberg Barclays Capital (BC) U.S. Aggregate Bond Index is generally representative of the U.S. taxable bond market as a whole. The Merrill Lynch (ML) 1-3 Year U.S. Corporate & Government Index tracks the bond performance of The ML U.S. Corporate & Government Index, with a remaining term to final maturity less than 3 years. The unmanaged Citigroup 1-Month Treasury Bill Index tracks the yield of the 1-month U.S. Treasury Bill.

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Asset Allocation Committee

Number of Members: 16
 Average Years of Experience: 26
 Average Tenure (Years): 13

Manager Review Group

Number of Members: 7
 Average Years of Experience: 20
 Average Tenure (Years): 7

PARS DIVERSIFIED PORTFOLIOS CAPITAL APPRECIATION

Q3 2017

WHY THE PARS DIVERSIFIED CAPITAL APPRECIATION PORTFOLIO?

Comprehensive Investment Solution

HighMark® Capital Management, Inc.'s (HighMark) diversified investment portfolios are designed to balance return expectations with risk tolerance. Key features include: sophisticated asset allocation and optimization techniques, four layers of diversification (asset class, style, manager, and security), access to rigorously screened, top tier money managers, flexible investment options, and experienced investment management.

Rigorous Manager Due Diligence

Our manager review committee utilizes a rigorous screening process that searches for investment managers and styles that have not only produced above-average returns within acceptable risk parameters, but have the resources and commitment to continue to deliver these results. We have set high standards for our investment managers and funds. This is a highly specialized, time consuming approach dedicated to one goal: competitive and consistent performance.

Flexible Investment Options

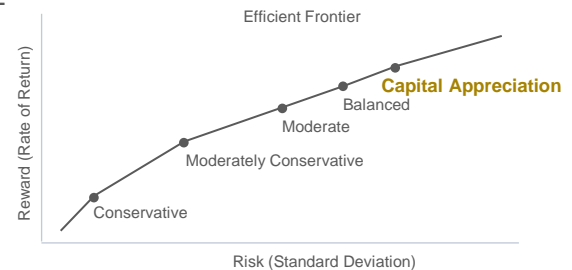
In order to meet the unique needs of our clients, we offer access to flexible implementation strategies: HighMark Plus utilizes actively managed mutual funds while Index Plus utilizes index-based securities, including exchange-traded funds. Both investment options leverage HighMark's active asset allocation approach.

Risk Management

The portfolio is constructed to control risk through four layers of diversification – asset classes (cash, fixed income, equity), investment styles (large cap, small cap, international, value, growth), managers and securities. Disciplined mutual fund selection and monitoring process helps to drive return potential while reducing portfolio risk.

INVESTMENT OBJECTIVE

The primary goal of the Capital Appreciation objective is growth of principal. The major portion of the assets are invested in equity securities and market fluctuations are expected.



ASSET ALLOCATION — CAPITAL APPRECIATION PORTFOLIO

	Strategic Range	Policy	Tactical
Equity	65 - 85%	75%	75%
Fixed Income	10 - 30%	20%	23%
Cash	0 - 20%	5%	2%

ANNUALIZED TOTAL RETURNS (Gross of Investment Management Fees, but Net of Embedded Fund Fees)

Current Quarter*	4.01%
Blended Benchmark**	3.79%
Year To Date	12.06%
Blended Benchmark	11.71%
1 Year	14.07%
Blended Benchmark	13.84%
3 Year	7.54%
Blended Benchmark	7.93%
5 Year	9.56%
Blended Benchmark	9.91%
Inception to Date (105-Mos.)	10.71%
Blended Benchmark	11.45%

* Returns less than 1-year are not annualized. **Breakdown for Blended Benchmark: 39.5% S&P500, 7.5% Russell Mid Cap, 10.5% Russell 2000, 5.25% MSCI EM FREE, 10.25% MSCI EAFE, 16% BC US Agg, 3% ML 1-3 Yr US Corp/Gov't, 1% US High Yield Master II, 2% Wilshire REIT, and 5% Citi 1 Mth T-Bill.

ANNUAL RETURNS

2008	N/A%
2009	23.77%
2010	12.95%
2011	-1.35%
2012	13.87%
2013	20.33%
2014	6.05%
2015	-0.27%
2016	8.81%

PORTFOLIO FACTS

HighMark Plus (Active)		Index Plus (Passive)	
Inception Data	01/2009	Inception Data	N/A
No of Funds in Portfolio	19	No of Funds in Portfolio	13

HOLDINGS

HighMark Plus (Active)

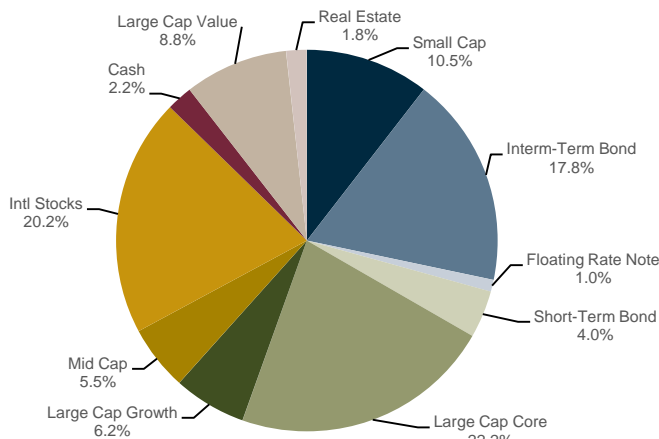
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AGENDA ITEM NO. 8.C.

DATE: November 15, 2017
TO: Board of Directors
FROM: Tammy Rudock, General Manager

SUBJECT: CONSIDER RESOLUTION 2017-22 AUTHORIZING PARTICIPATION IN THE PARS COMBINATION IRS SECTION 115 TRUST PLAN, INCLUDING THE MPWD OTHER POST-EMPLOYMENT BENEFITS (OPEB) PLAN AND ESTABLISHMENT OF THE PENSION RATE STABILIZATION PROGRAM (PRSP) TO PRE-FUND MPWD PENSION LIABILITIES, AND AUTHORIZING AN INITIAL PRSP DEPOSIT IN THE AMOUNT OF \$100,000

RECOMMENDATION

Approve Resolution 2017-22 authorizing participation in the PARS combination IRS Section 115 Trust Plan, including the MPWD OPEB Plan and establishment of the PRSP to pre-fund MPWD pension liabilities, and authorize an initial PRSP deposit in the amount of \$100,000.

FISCAL IMPACT

The MPWD's Unfunded Accrued (Pension) Liability (UAL) was \$1,532,792 per the CalPERS Actuarial Valuation as of June 30, 2016. The UAL is a "moving target" depending upon the performance of CalPERS investments (ROI). Comparatively, the MPWD's UAL as of:

- June 30, 2015 CalPERS valuation was \$1,164,599;
- June 30, 2014 CalPERS valuation was \$ 972,216; and
- June 30, 2013 CalPERS valuation was \$1,096,423.

Attached for reference is the MPWD's CalPERS Actuarial Valuation as of June 30, 2016. Staff will summarize highlights from the report at the Board meeting. Staff recommends an advance review of these pages within the report: Cover page, pages 4-6, 9-12, 15, 18, and 20.

Section 2 attached to the report is the actuarial valuation for the CalPERS Miscellaneous Risk Pool, of which the MPWD is a member. The following pages provide actuarial information for advance review on the pool: Pages 8-10 and 13-14.

On December 21, 2016, CalPERS lowered the discount rate from 7.5% to 7.0% utilizing a 3-year phase-in beginning with the June 30, 2016 actuarial valuations:

- FY 2016/2017 discount rate = 7.5%
- FY 2017/2018 discount rate = 7.375%
- FY 2018/2019 discount rate = 7.25%
- FY 2019/2020 discount rate = 7.0%

Finally, the funded ratio of the MPWD's plan as of:

- June 30, 2016: 74.3%
- June 30, 2015: 78.6%
- June 30, 2014: 80.2%
- June 30, 2013: 75.2%

The MPWD Financial Audit Report for FYE June 30 2016 projected that at a discount rate of 6.65% the MPWD plan's net pension liability would be \$1,867,484.

Staff recommends a \$100,000 initial deposit for the MPWD PRSP. There are sufficient revenues or reserves to cover this funding. Increased funding is anticipated to be recommended during the mid-year budget review.

BACKGROUND

As reported last year and introduced in 2015, the PARS PRSP is available to the MPWD and would provide an opportunity for pre-funding pension liabilities in a combined trust with the MPWD's OPEB account and these following advantages:

- No cost to set up;
- Allows control over contributions and disbursements—timing, amount and risk tolerance;
- More balanced investment strategy than CalPERS, and offsets pension rate increases and underperformance by CalPERS;
- Allows for assets—OPEB and PRSP—to aggregate resulting in lower fees on tiered schedule;
- PRSP funds may be used for pension obligations at any time, including pay down of UAL;
- Diversified investment potential for greater return than LAIF; and
- Addresses the MPWD's unfunded pension liability for GASB 68 reporting.

DISCUSSION

There are currently two (2) independent retirement plan administrators for pre-funding pension and OPEB costs: PARS and Public Financial Management Group (PFM). Both have received a Private Letter Ruling from the IRS and have large public client bases.

A comparison table from Daly City's April 10, 2017, Council Meeting is attached for reference, which provides an overview of the two plan administrators for OPEB and PRSP.

Staff met with the PARS OPEB investment team on November 6, 2017 and discussed the establishment of a PRSP for the MPWD, including the advantages listed above. The PARS PRSP presentation is attached for reference.

The MPWD's combined trust team, including the PRSP, would consist of:

- PARS – Trust Administrator and Consultant;
- US Bank – Trustee; and
- HighMark Capital Investment – Investment Manager.

Jennifer Meza, Supervisor/Client Services, from PARS will present an overview of the proposed PRSP for the MPWD.

Attachments: Resolution 2017-22
CalPERS Actuarial Valuation for MPWD as of June 30, 2016
City of Daly City's April 10, 2017, Overview of OPEB and PRSP Administrators
PARS PRSP Presentation

BOARD ACTION: APPROVED:_____ DENIED:_____ POSTPONED:_____ STAFF DIRECTION:_____

UNANIMOUS_____ STUEBING_____ WARDEN_____ VELLA_____ LINVILL_____ ZUCCA_____

RESOLUTION NO. 2017-22

**RESOLUTION OF THE BOARD OF DIRECTORS
OF THE MID-PENINSULA WATER DISTRICT
AUTHORIZING PARTICIPATION IN THE PARS COMBINATION
IRS SECTION 115 TRUST PLAN,
INCLUDING THE MPWD OTHER POST-EMPLOYMENT BENEFITS (OPEB) PLAN
AND ESTABLISHMENT OF THE PENSION RATE STABILIZATION PROGRAM (PRSP)
TO PRE-FUND MPWD PENSION LIABILITIES, AND
AUTHORIZING AN INITIAL PRSP DEPOSIT IN THE AMOUNT OF \$100,000**

* * *

MID-PENINSULA WATER DISTRICT

WHEREAS, the Mid-Peninsula Water District (the "District") is currently participating in the Public Agencies Post-Retirement Health Care Plan Trust for the pre-funding of its retiree health benefits and other post-employment benefits other than pension benefits ("OPEB"); and

WHEREAS, the District desires to set aside funds for the purpose of pre-funding its CalPERS pension obligation that will be held in trust in the Pension Rate Stabilization Program ("PRSP") for the exclusive purpose of making future contributions of the District's required pension contributions and any employer contributions in excess of such required contributions at the discretion of the District; and

WHEREAS, the Public Agency Retirement Services (PARS) has made available the Public Agencies Post-Employment Benefits Trust (the "Program") for the purpose of pre-funding both pension obligations and/or OPEB obligations as specified in the District's plans, policies and/or applicable collective labor bargaining agreements; and

WHEREAS, the District is eligible to participate in the Program, a tax-exempt trust performing an essential governmental function within the meaning of Section 115 of the Internal Revenue Code, as amended, and the Regulations issued there under, and is a tax-exempt trust under the relevant statutory provisions of the State of California; and

WHEREAS, the District can manage the pre-funding of its pension in the PRSP and OPEB obligations in a single trust under this Program, thereby gaining administrative and cost efficiencies; and

WHEREAS, an initial PRSP deposit in the amount of ONE HUNDRED THOUSAND AND NO/100 DOLLARS (\$100,000) has been recommended by staff and funds are available within current projected operating surpluses or cash reserve funds; and

WHEREAS, the District's funding of the PRSP does not, and is not intended to, create any new vested right to any benefit nor strengthen any existing vested right; and

WHEREAS, the District reserves the right to make contributions, if any, to the Program.

NOW THEREFORE, BE IT RESOLVED THAT:

1. The Board of Directors of the Mid-Peninsula Water District hereby adopts the establishment of the Pension Rate Stabilization Fund (“PRSP”); and
2. The Board of Directors of the District hereby adopts the Public Agencies Post-Employment Benefits Trust for the prefunding of its pension and OPEB obligations; and
3. The Board of Directors of the District hereby appoints the General Manager, or their successor or designee, as the District’s Plan Administrator for the Program; and
4. The District’s Plan Administrator is hereby authorized to execute the PARS legal and administrative documents on behalf of the District and to take whatever additional actions are necessary to maintain the District’s participation in the Program and to maintain compliance of any relevant regulation issued or as may be issued; therefore, authorizing him/her to take whatever additional actions are required to administer the District’s Program; and
5. The Board of Directors of the District hereby authorizes an initial PRSP deposit in the amount of ONE HUNDRED THOUSAND AND NO/100 DOLLARS (\$100,000) effective November 15, 2017.

REGULARLY PASSED AND ADOPTED this 15th day of November 2017, by the following vote:

AYES:

NOES:

ABSTENTIONS:

ABSENCES:

President, Board of Directors
Mid-Peninsula Water District

ATTEST:

District Secretary



California Public Employees' Retirement System
Actuarial Office
 P.O. Box 942709
 Sacramento, CA 94229-2709
 TTY: (916) 795-3240
 (888) 225-7377 phone – (916) 795-2744 fax
www.calpers.ca.gov

August 2017

**MISCELLANEOUS PLAN OF THE MID-PENINSULA WATER DISTRICT
 (CalPERS ID: 3764984881)
 Annual Valuation Report as of June 30, 2016**

Dear Employer,

As an attachment to this letter, you will find a copy of the June 30, 2016 actuarial valuation report of the pension plan.

Because this plan is in a risk pool, the following valuation report has been separated into two sections:

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2016.

Section 2 can be found on the CalPERS website at (www.calpers.ca.gov). From the home page, go to "Forms & Publications" and select "View All". In the search box, enter "Risk Pool Report" and from the results list download the Miscellaneous or Safety Risk Pool Actuarial Valuation Report as appropriate.

Your June 30, 2016 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you after August 31, 2017.

The exhibit below displays the minimum employer contributions, before any cost sharing, for Fiscal Year 2018-19 along with estimates of the required contributions for Fiscal Years 2019-20 and 2020-21. Member contributions other than cost sharing (whether paid by the employer or the employee) are in addition to the results shown below. **The employer contributions in this report do not reflect any cost sharing arrangements you may have with your employees.**

Required Contribution

Fiscal Year	Employer Normal Cost Rate	Employer Payment of Unfunded Liability
2018-19	8.892%	\$131,009
<i>Projected Results</i>		
2019-20	9.3%	\$153,000
2020-21	10.2%	\$106,000

The actual investment return for Fiscal Year 2016-17 was not known at the time this report was prepared. The projections above assume the investment return for that year would be 7.375 percent. ***If the actual investment return for Fiscal Year 2016-17 differs from 7.375 percent, the actual contribution requirements for the projected years will differ from those shown above.***

Moreover, the projected results for Fiscal Years 2019-20 and 2020-21 also assume that there are no future plan changes, no further changes in assumptions other than those recently approved, and no liability gains or losses. Such changes can have a significant impact on required contributions. Since they cannot be predicted in advance, the projected employer results shown above are estimates. The actual required employer contributions for Fiscal Year 2019-20 will be provided in next year's report.

For additional details regarding the assumptions and methods used for these projections please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section.

The "Risk Analysis" section of the valuation report also contains estimated employer contributions in future years under a variety of investment return scenarios.

Changes since the Prior Year's Valuation

On December 21, 2016, the CalPERS Board of Administration lowered the discount rate from 7.50 percent to 7.00 percent using a three year phase-in beginning with the June 30, 2016 actuarial valuations. The minimum employer contributions for Fiscal Year 2018-19 determined in this valuation were calculated using a discount rate of 7.375 percent. The projected employer contributions on Page 5 are calculated assuming that the discount rate will be lowered to 7.25 percent next year and to 7.00 percent the following year as adopted by the Board.

The CalPERS Board of Administration adopted a Risk Mitigation Policy which is designed to reduce funding risk over time. This Policy has been temporarily suspended during the period over which the discount rate is being lowered. More details on the Risk Mitigation Policy can be found on our website.

Besides the above noted changes, there may also be changes specific to the plan such as contract amendments and funding changes.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A, "Statement of Actuarial Data, Methods and Assumptions" of the Section 2 report.

We understand that you might have a number of questions about these results. While we are very interested in discussing these results with your agency, in the interest of allowing us to give every public agency their results, we ask that you wait until after August 31 to contact us with actuarial related questions.

If you have other questions, please call our customer contact center at (888) CalPERS or **(888-225-7377)**.

Sincerely,

SCOTT TERANDO
Chief Actuary



**ACTUARIAL VALUATION
as of June 30, 2016**

**for the
MISCELLANEOUS PLAN
of the
MID-PENINSULA WATER DISTRICT
(CalPERS ID: 3764984881)**

**REQUIRED CONTRIBUTIONS
FOR FISCAL YEAR
July 1, 2018 - June 30, 2019**

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SECTION 2 – RISK POOL ACTUARIAL VALUATION INFORMATION

Section 1

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

**Plan Specific Information
for the
MISCELLANEOUS PLAN
of the
MID-PENINSULA WATER DISTRICT**

**(CalPERS ID: 3764984881)
(Rate Plan: 3250)**

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ACTUARIAL CERTIFICATION

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2016 which was provided by your agency and the benefit provisions under your contract with CalPERS. Section 2 of this report is based on the member and financial data as of June 30, 2016 provided by employers participating in the Miscellaneous Risk Pool to which the plan belongs and benefit provisions under the CalPERS contracts for those agencies.

As set forth in Section 2 of this report, the pool actuary has certified that, in their opinion, the valuation of the risk pool containing your MISCELLANEOUS PLAN has been performed in accordance with generally accepted actuarial principles consistent with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for the risk pool as of the date of this valuation and as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

Having relied upon the information set forth in Section 2 of this report and based on the census and benefit provision information for the plan, it is my opinion as the plan actuary that Unfunded Accrued Liability amortization bases as of June 30, 2016 and employer contribution as of July 1, 2018, have been properly and accurately determined in accordance with the principles and standards stated above.

The undersigned is an actuary for CalPERS, a member of both the American Academy of Actuaries and Society of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

JULIAN ROBINSON, FSA, EA, MAAA
Senior Pension Actuary, CalPERS
Plan Actuary

HIGHLIGHTS AND EXECUTIVE SUMMARY

- **INTRODUCTION**
- **PURPOSE OF SECTION 1**
- **REQUIRED EMPLOYER CONTRIBUTION**
- **PLAN'S FUNDED STATUS**
- **PROJECTED EMPLOYER CONTRIBUTIONS**
- **CHANGES SINCE THE PRIOR YEAR'S VALUATION**
- **SUBSEQUENT EVENTS**

Introduction

This report presents the results of the June 30, 2016 actuarial valuation of the MISCELLANEOUS PLAN of the MID-PENINSULA WATER DISTRICT of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for Fiscal Year 2018-19.

Purpose of Section 1

This Section 1 report for the MISCELLANEOUS PLAN of the MID-PENINSULA WATER DISTRICT of the California Public Employees' Retirement System (CalPERS) was prepared by the plan actuary in order to:

- Set forth the assets and accrued liabilities of this plan as of June 30, 2016;
- Determine the required employer contribution for this plan for the fiscal year July 1, 2018 through June 30, 2019; and
- Provide actuarial information as of June 30, 2016 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to GASB Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available from CalPERS and details for ordering are available on our website.

The measurements shown in this actuarial valuation may not be applicable for other purposes. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; changes in actuarial policies; and changes in plan provisions or applicable law.

California Actuarial Advisory Panel Recommendations

This report includes all the basic disclosure elements as described in the *Model Disclosure Elements for Actuarial Valuation Reports* recommended in 2011 by the California Actuarial Advisory Panel (CAAP), with the exception of including the original base amounts of the various components of the unfunded liability in the Schedule of Amortization Bases shown on page 9.

Additionally, this report includes the following "Enhanced Risk Disclosures" also recommended by the CAAP in the Model Disclosure Elements document:

- A "Deterministic Stress Test," projecting future results under different investment income scenarios
- A "Sensitivity Analysis," showing the impact on current valuation results using alternative discount rates of 6.0 percent, 7.0 percent and 8.0 percent.

Required Employer Contribution

	Fiscal Year	
Required Employer Contribution	2018-19	
Employer Normal Cost Rate	8.892%	
<i>Plus Either</i>		
1) Monthly Employer Dollar UAL Payment	\$	10,917.38
<i>Or</i>		
2) Annual Lump Sum Prepayment Option	\$	126,429
<p><i>The total minimum required employer contribution is the sum of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll) plus the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly in dollars).</i></p> <p><i>Only the UAL portion of the employer contribution can be prepaid (which must be received in full no later than July 31). Plan Normal Cost contributions will be made as part of the payroll reporting process. If there is contractual cost sharing or other change, this amount will change.</i></p> <p><i>§ 20572 of the Public Employees' Retirement Law assesses interest at an annual rate of 10 percent if a contracting agency fails to remit the required contributions when due.</i></p>		

	Fiscal Year	Fiscal Year
	2017-18	2018-19
Development of Normal Cost as a Percentage of Payroll¹		
Base Total Normal Cost for Formula	15.314%	15.794%
Surcharge for Class 1 Benefits ²		
None	0.000%	0.000%
Phase out of Normal Cost Difference ³	0.000%	0.000%
Plan's Total Normal Cost	15.314%	15.794%
Formula's Expected Employee Contribution Rate	6.896%	6.902%
Employer Normal Cost Rate	8.418%	8.892%
Projected Payroll for the Contribution Fiscal Year	\$ 1,580,368	\$ 1,612,273
Estimated Employer Contributions Based on Projected Payroll		
Plan's Estimated Employer Normal Cost	\$ 133,035	\$ 143,363
Plan's Payment on Amortization Bases ⁴	111,625	131,009
% of Projected Payroll (illustrative only)	7.063%	8.126%
Estimated Total Employer Contribution	\$ 244,660	\$ 274,372
% of Projected Payroll (illustrative only)	15.481%	17.018%

¹ The results shown for Fiscal Year 2017-18 reflect the prior year valuation and may not take into account any lump sum payment, side fund payoff, or rate adjustment made after June 30, 2016.

² Section 2 of this report contains a list of Class 1 benefits and corresponding surcharges for each benefit.

³ The normal cost difference is phased out over a five year period. The phase out of normal cost difference is 100 percent for the first year of pooling, and is incrementally reduced by 20 percent of the original normal cost difference for each subsequent year. This is non-zero only for plans that joined a pool within the past 5 years. Most plans joined a pool June 30, 2003, when risk pooling was implemented.

⁴ See page 9 for a breakdown of the Amortization Bases.

Plan's Funded Status

	June 30, 2015	June 30, 2016
1. Present Value of Projected Benefits (PVB)	\$ 7,160,725	\$ 7,694,956
2. Entry Age Normal Accrued Liability (AL)	5,444,411	5,973,981
3. Plan's Market Value of Assets (MVA)	4,279,812	4,441,189
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	1,164,599	1,532,792
5. Funded Ratio [(3) / (2)]	78.6%	74.3%

This measure of funded status is an assessment of the need for future employer contributions based on the selected actuarial cost method used to fund the plan. The UAL is the present value of future employer contributions for service that has already been earned and is in addition to future normal cost contributions for active members. For a measure of funded status that is appropriate for assessing the sufficiency of plan assets to cover estimated termination liabilities, please see "Hypothetical Termination Liability" in the "Risk Analysis" section.

Projected Employer Contributions

The table below shows projected employer contributions (before cost sharing) for the next six fiscal years. Projected results reflect the adopted changes to the discount rate described in Appendix A, "Statement of Actuarial Data, Methods and Assumptions" of the Section 2 report. The projections also assume that all actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur during the projection period.

Fiscal Year	Required Contribution	Projected Future Employer Contributions (Assumes 7.375% Return for Fiscal Year 2016-17)					
		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
Normal Cost %	8.892%	9.3%	10.2%	10.2%	10.2%	10.2%	10.2%
UAL Payment	\$131,009	\$153,000	\$106,000	\$127,000	\$146,000	\$158,000	\$168,000

Changes in the UAL due to actuarial gains or losses as well as changes in actuarial assumptions or methods are amortized using a 5-year ramp up. For more information, please see "Amortization of the Unfunded Actuarial Accrued Liability" under "Actuarial Methods" in Appendix A of Section 2. This method phases in the impact of unanticipated changes in UAL over a 5-year period and attempts to minimize employer cost volatility from year to year. As a result of this methodology, dramatic changes in the required employer contributions in any one year are less likely. However, required contributions can change gradually and significantly over the next five years. In years where there is a large increase in UAL the relatively small amortization payments during the ramp up period could result in a funded ratio that is projected to decrease initially while the contribution impact of the increase in the UAL is phased in.

Due to the adopted changes in the discount rate for the next two valuations in combination with the 5-year phase-in ramp, the increases in the required contributions are expected to continue for seven years from Fiscal Year 2018-19 through Fiscal Year 2024-25.

For projected contributions under alternate investment return scenarios, please see the "Analysis of Future Investment Return Scenarios" in the "Risk Analysis" section.

Changes since the Prior Year's Valuation

Benefits

None. This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of Section 2 for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

On December 21, 2016, the CalPERS Board of Administration lowered the discount rate from 7.50 percent to 7.00 percent using a three year phase-in beginning with the June 30, 2016 actuarial valuations. The minimum employer contributions for Fiscal Year 2018-19 determined in this valuation were calculated using a discount rate of 7.375 percent. The projected employer contributions on Page 5 are calculated assuming that the discount rate will be lowered to 7.25 percent next year and 7.00 percent the following year as adopted by the Board. The decision to reduce the discount rate was primarily based on reduced capital market assumptions provided by external investment consultants and CalPERS investment staff. The specific decision adopted by the Board reflected recommendations from CalPERS staff and additional input from employer and employee stakeholder groups. Based on the investment allocation adopted by the Board and capital market assumptions, the reduced discount rate assumption provides a more realistic assumption for the long term investment return of the fund.

Notwithstanding the Board's decision to phase into a 7.0 percent discount rate, subsequent analysis of the expected investment return of CalPERS assets or changes to the investment allocation may result in a change to this three year discount rate schedule. A comprehensive analysis of all actuarial assumptions and methods including the discount rate will be conducted in 2017.

Subsequent Events

The contribution requirements determined in this actuarial valuation report are based on demographic and financial information as of June 30, 2016. Changes in the value of assets subsequent to that date are not reflected. Declines in asset values will increase the required contribution, while investment returns above the assumed rate of return will decrease the actuarial cost of the plan.

This actuarial valuation report reflects statutory changes, regulatory changes and CalPERS Board actions through January 2017. Any subsequent changes or actions are not reflected.

ASSETS AND LIABILITIES

- **BREAKDOWN OF ENTRY AGE NORMAL ACCRUED LIABILITY**
- **ALLOCATION OF PLAN'S SHARE OF POOL'S EXPERIENCE/ASSUMPTION CHANGE**
- **DEVELOPMENT OF PLAN'S SHARE OF POOL'S MVA**
- **SCHEDULE OF PLAN'S AMORTIZATION BASES**
- **30-YEAR AMORTIZATION SCHEDULE AND ALTERNATIVES**
- **EMPLOYER CONTRIBUTION HISTORY**
- **FUNDING HISTORY**

Breakdown of Entry Age Normal Accrued Liability

1. Active Members	\$	3,867,234
2. Transferred Members		351,215
3. Terminated Members		94,850
4. Members and Beneficiaries Receiving Payments		<u>1,660,682</u>
5. Total	\$	5,973,981

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1. Plan's Accrued Liability	\$	5,973,981
2. Projected UAL balance at 6/30/16		1,165,900
3. Pool's Accrued Liability	\$	14,775,287,594
4. Sum of Pool's Individual Plan UAL Balances at 6/30/16		2,987,498,021
5. Pool's 2015/16 Investment & Asset (Gain)/Loss		771,070,186
6. Pool's 2015/16 Other (Gain)/Loss		(95,296,686)
7. Plan's Share of Pool's Asset (Gain)/Loss $[(1)-(2)]/[(3)-(4)] * (5)$		314,509
8. Plan's Share of Pool's Other (Gain)/Loss $[(1)]/[(3)] * (6)$		(38,531)
9. Plan's New (Gain)/Loss as of 6/30/2016 $[(7)+(8)]$	\$	275,979
10. Increase in Pool's Accrued Liability due to Change in Assumptions		224,853,121
11. Plan's Share of Pool's Change in Assumptions $[(1)]/[(3)] * (10)$	\$	90,913

Development of the Plan's Share of Pool's Market Value of Assets

1. Plan's Accrued Liability	\$	5,973,981
2. Plan's UAL	\$	1,532,792
3. Plan's Share of Pool's MVA $[(1)-(2)]$	\$	4,441,189

Schedule of Plan's Side Fund and Other Amortization Bases

There is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2016.
- The employer contribution determined by the valuation is for the fiscal year beginning two years after the valuation date: Fiscal Year 2018-19.

This two-year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and the need to provide public agencies with their employer contribution well in advance of the start of the fiscal year.

The Unfunded Accrued Liability (UAL) is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The UAL is rolled forward each year by subtracting the payment on the UAL for the fiscal year and adjusting for interest.

Reason for Base	Date Established	Amortization Period	Balance 6/30/16	Payment 2016-17	Balance 6/30/17	Payment 2017-18	Amounts for Fiscal 2018-19	
							Balance 6/30/18	Scheduled Payment for 2018-19
SIDE FUND	2013 or Prior	2	\$219,568	\$60,614	\$172,952	\$62,433	\$121,013	\$64,002
SHARE OF PRE-2013 POOL UAL	06/30/13	19	\$334,677	\$24,511	\$333,961	\$25,246	\$332,430	\$25,691
ASSET (GAIN)/LOSS	06/30/13	27	\$513,104	\$14,020	\$536,418	\$21,660	\$553,534	\$29,315
NON-ASSET (GAIN)/LOSS	06/30/13	27	\$(5,330)	\$(146)	\$(5,572)	\$(225)	\$(5,750)	\$(305)
ASSET (GAIN)/LOSS	06/30/14	28	\$(389,832)	\$(5,483)	\$(412,901)	\$(11,295)	\$(431,648)	\$(17,187)
NON-ASSET (GAIN)/LOSS	06/30/14	28	\$442	\$6	\$468	\$13	\$489	\$19
ASSUMPTION CHANGE	06/30/14	18	\$262,651	\$5,003	\$276,837	\$10,306	\$286,574	\$15,747
ASSET (GAIN)/LOSS	06/30/15	29	\$251,280	\$0	\$269,812	\$3,799	\$285,774	\$7,702
NON-ASSET (GAIN)/LOSS	06/30/15	29	\$(20,660)	\$0	\$(22,184)	\$(312)	\$(23,497)	\$(633)
ASSET (GAIN)/LOSS	06/30/16	30	\$314,509	\$0	\$337,704	\$0	\$362,610	\$5,026
NON-ASSET (GAIN)/LOSS	06/30/16	30	\$(38,531)	\$0	\$(41,372)	\$0	\$(44,423)	\$(616)
ASSUMPTION CHANGE	06/30/16	20	\$90,913	\$(6,580)	\$104,437	\$(6,778)	\$119,162	\$2,246
TOTAL			\$1,532,791	\$91,945	\$1,550,560	\$104,847	\$1,556,268	\$131,007

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed on the previous page. These (gain)/loss bases will be amortized according to Board policy over 30 years with a 5-year ramp-up.

If the total Unfunded Liability is negative (i.e., plan has a surplus), the scheduled payment is \$0, because the minimum required contribution under PEPRa must be at least equal to the normal cost.

30-Year Amortization Schedule and Alternatives

The amortization schedule on the previous page shows the minimum contributions required according to CalPERS amortization policy. There has been considerable interest from many agencies in paying off these unfunded accrued liabilities sooner and the possible savings in doing so. As a result, we have provided alternate amortization schedules to help analyze the current amortization schedule and illustrate the advantages of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on: 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternate "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. Note that the payments under each alternate scenario increase by 3 percent for each year into the future. **The schedules do not attempt to reflect any experience after June 30, 2016 that may deviate from the actuarial assumptions. Therefore, future amortization payments displayed in the Current Amortization Schedule may not match projected amortization payments shown in connection with Projected Employer Contributions provided elsewhere in this report.**

The Current Amortization Schedule typically contains individual bases that are both positive and negative. Positive bases result from plan changes, assumption changes or plan experience that result in increases to unfunded liability. Negative bases result from plan changes, assumption changes or plan experience that result in decreases to unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years such as:

- A positive total unfunded liability with a negative total payment,
- A negative total unfunded liability with a positive total payment, or
- Total payments that completely amortize the unfunded liability over a very short period of time

In any year where one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy. For purposes of this display, total payments include any negative payments. Therefore, the amount of estimated savings may be understated to the extent that negative payments appear in the current schedule.

30-Year Amortization Schedule and Alternatives

Date	<u>Current Amortization Schedule</u>		<u>Alternate Schedules</u>			
	Balance	Payment	20 Year Amortization		15 Year Amortization	
			Balance	Payment	Balance	Payment
6/30/2018	1,556,269	131,009	1,556,269	116,335	1,556,269	141,552
6/30/2019	1,535,291	152,418	1,550,496	119,825	1,524,366	145,798
6/30/2020	1,490,580	99,400	1,540,680	123,420	1,485,708	150,172
6/30/2021	1,497,510	113,518	1,526,415	127,122	1,439,668	154,677
6/30/2022	1,490,322	124,415	1,507,261	130,936	1,385,564	159,318
6/30/2023	1,471,312	128,148	1,482,743	134,864	1,322,661	164,097
6/30/2024	1,447,032	131,992	1,452,347	138,910	1,250,167	169,020
6/30/2025	1,416,978	135,952	1,415,516	143,077	1,167,224	174,091
6/30/2026	1,380,604	140,030	1,371,651	147,370	1,072,911	179,314
6/30/2027	1,337,322	144,231	1,320,103	151,791	966,230	184,693
6/30/2028	1,286,494	148,558	1,260,172	156,345	846,107	190,234
6/30/2029	1,227,434	153,015	1,191,102	161,035	711,384	195,941
6/30/2030	1,159,401	157,605	1,112,079	165,866	560,811	201,819
6/30/2031	1,081,593	162,333	1,022,221	170,842	393,042	207,874
6/30/2032	993,147	159,264	920,580	175,967	206,626	214,110
6/30/2033	901,360	155,864	806,133	181,246		
6/30/2034	806,326	148,513	677,774	186,684		
6/30/2035	711,901	140,580	534,315	192,284		
6/30/2036	618,732	132,037	374,472	198,053		
6/30/2037	527,544	87,011	196,864	203,994		
6/30/2038	476,288	85,565				
6/30/2039	422,750	88,132				
6/30/2040	362,604	90,776				
6/30/2041	295,283	79,185				
6/30/2042	235,007	78,450				
6/30/2043	171,048	70,199				
6/30/2044	110,922	51,871				
6/30/2045	65,353	32,380				
6/30/2046	36,620	28,267				
6/30/2047	10,030	10,393				
Totals		3,361,109		3,125,965		2,632,709
Interest Paid		1,804,839		1,569,695		1,076,440
Estimated Savings				235,143		728,399

* This schedule does not reflect the impact of adopted discount rate changes that will become effective beyond June 30, 2016. For Projected Employer Contributions, please see Page 5.

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan, as determined by the annual actuarial valuation. It does not account for prepayments or benefit changes made during a fiscal year.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment (\$)
2016 - 17	8.377%	\$98,525
2017 - 18	8.418%	\$111,625
2018 - 19	8.892%	\$131,009

Funding History

The funding history below shows the plan's actuarial accrued liability, share of the pool's market value of assets, share of the pool's unfunded liability, funded ratio, and annual covered payroll.

Valuation Date	Accrued Liability (AL)	Share of Pool's Market Value of Assets (MVA)	Plan's Share of Pool's Unfunded Liability	Funded Ratio	Annual Covered Payroll
06/30/2011	\$ 3,779,240	\$ 2,778,325	\$ 1,000,915	73.5%	\$ 1,107,869
06/30/2012	4,051,866	2,849,619	1,202,247	70.3%	1,010,285
06/30/2013	4,420,919	3,324,496	1,096,423	75.2%	1,144,064
06/30/2014	4,905,355	3,933,139	972,216	80.2%	1,261,412
06/30/2015	5,444,411	4,279,812	1,164,599	78.6%	1,446,261
06/30/2016	5,973,981	4,441,189	1,532,792	74.3%	1,475,458

RISK ANALYSIS

- **ANALYSIS OF FUTURE INVESTMENT RETURN SCENARIOS**
- **ANALYSIS OF DISCOUNT RATE SENSITIVITY**
- **VOLATILITY RATIOS**
- **HYPOTHETICAL TERMINATION LIABILITY**

Analysis of Future Investment Return Scenarios

Analysis was performed to determine the effects of various future investment returns on required employer contributions. The projections below provide a range of results based on five investment return scenarios assumed to occur during the next four fiscal years (2016-17, 2017-18, 2018-19 and 2019-20). The projections also assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

Each of the five investment return scenarios assumes a return of 7.375 percent for fiscal year 2016-17. For fiscal years 2017-18, 2018-19, and 2019-20 each scenario assumes an alternate fixed annual return. The fixed return assumptions for the five scenarios are -3.0 percent, 3.0 percent, 7.0 percent (7.25 percent for 2017-18), 11.0 percent and 17.0 percent.

Alternate investment returns were chosen based on stochastic analysis of possible future investment returns over the four year period ending June 30, 2020. Using the expected returns and volatility of the asset classes in which the funds are invested, we produced ten thousand stochastic outcomes for this period. We then selected annual returns that approximate the 5th, 25th, 50th, 75th, and 95th percentiles for these outcomes. For example, of all of the 4-year outcomes generated in the stochastic analysis, approximately 25 percent of them had an average annual return of 3.0 percent or less.

Required contributions outside of this range are also possible. In particular, while it is unlikely that investment returns will average less than -3.0 percent or greater than 17.0 percent over this four year period, the possibility of a single investment return less than -3.0 percent or greater than 17.0 percent in any given year is much greater.

Assumed Annual Return From 2017-18 through 2019-20	Projected Employer Contributions			
	2019-20	2020-21	2021-22	2022-23
(3.0%)				
Normal Cost	9.3%	10.2%	10.2%	10.2%
UAL Contribution	\$153,000	\$113,000	\$149,000	\$190,000
3.0%				
Normal Cost	9.3%	10.2%	10.2%	10.2%
UAL Contribution	\$153,000	\$109,000	\$136,000	\$164,000
Assumed Discount Rate				
Normal Cost	9.3%	10.2%	10.2%	10.2%
UAL Contribution	\$153,000	\$106,000	\$127,000	\$146,000
11.0%				
Normal Cost	9.3%	10.2%	10.4%	10.6%
UAL Contribution	\$153,000	\$103,000	\$118,000	\$128,000
17.0%				
Normal Cost	9.3%	10.2%	10.8%	11.5%
UAL Contribution	\$153,000	\$99,000	\$105,000	\$101,000

Given the temporary suspension of the Risk Mitigation Policy during the period over which the discount rate assumption is being phased down to 7.0 percent, the projections above were performed without reflection of any possible impact of this Policy for Fiscal Years 2019-20 and 2020-21.

Analysis of Discount Rate Sensitivity

Shown below are various valuation results as of June 30, 2016 assuming alternate discount rates. Results are shown using the current discount rate of 7.375 percent as well as alternate discount rates of 6.0 percent, 7.0 percent, and 8.0 percent. The alternate rate of 7.0 percent was selected since the Board has adopted this rate as the final discount rate at the end of the three year phase-in of the reduction in this assumption. The rates of 6.0 percent and 8.0 percent were selected since they illustrate the impact of a 1 percent increase or decrease to the 7.0 percent assumption. This analysis shows the potential plan impacts if the PERF were to realize investment returns of 6.0 percent, 7.0 percent, or 8.0 percent over the long-term.

This type of analysis gives the reader a sense of the long-term risk to required contributions. For a measure of funded status that is appropriate for assessing the sufficiency of plan assets to cover estimated termination liabilities, please see "Hypothetical Termination Liability" in the "Risk Analysis" section.

Sensitivity Analysis				
As of June 30, 2016	Plan's Total Normal Cost	Accrued Liability	Unfunded Accrued Liability	Funded Status
7.375% (current discount rate)	15.794%	\$5,973,981	\$1,532,792	74.3%
6.0%	21.320%	\$7,356,682	\$2,915,493	60.4%
7.0%	17.103%	\$6,313,511	\$1,872,322	70.3%
8.0%	13.881%	\$5,461,661	\$1,020,472	81.3%

Volatility Ratios

Actuarial calculations are based on a number of assumptions about long-term demographic and economic behavior. Unless these assumptions (terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise required employer contributions from one year to the next. Therefore, employer contributions will inevitably fluctuate, especially due to the ups and downs of investment returns.

Asset Volatility Ratio (AVR)

Plans that have higher asset-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility, than a plan with an asset-to-payroll ratio of 4. Shown below is the asset volatility ratio, a measure of the plan's current contribution volatility. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio (LVR)

Plans that have higher liability-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return and changes in liability. For example, a plan with a liability-to-payroll ratio of 8 is expected to have twice the contribution volatility of a plan with a liability-to-payroll ratio of 4. The liability volatility ratio is also shown in the table below. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The asset volatility ratio, described above, will tend to move closer to the liability volatility ratio as the plan matures. Since the liability volatility ratio is a long-term measure, it is shown below at the current discount rate (7.375 percent) as well as the discount rate the Board has adopted to determine the contribution requirement in the June 30, 2018 actuarial valuation (7.00 percent).

Rate Volatility	As of June 30, 2016	
1. Market Value of Assets	\$	4,441,189
2. Payroll		1,475,458
3. Asset Volatility Ratio (AVR) [(1) / (2)]		3.0
4. Accrued Liability	\$	5,973,981
5. Liability Volatility Ratio (LVR) [(4) / (2)]		4.0
6. Accrued Liability (7.00% discount rate)		6,313,511
7. Projected Liability Volatility Ratio [(6) / (2)]		4.3

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2016. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed. This measure of funded status is not appropriate for assessing the need for future employer contributions in the case of an ongoing plan, that is, for an employer that continues to provide CalPERS retirement benefits to active employees.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while funding risk is limited. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 2-year period centered around the valuation date.

Market Value of Assets (MVA)	Hypothetical Termination Liability^{1,2} @ 1.75%	Funded Status	Unfunded Termination Liability @ 1.75%	Hypothetical Termination Liability^{1,2} @ 3.00%	Funded Status	Unfunded Termination Liability @ 3.00%
\$4,441,189	\$12,089,470	36.7%	\$7,648,281	\$9,985,196	44.5%	\$5,544,007

¹ The hypothetical liabilities calculated above include a 7 percent mortality contingency load in accordance with Board policy. Other actuarial assumptions can be found in Appendix A.

² The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 1.75 percent on June 30, 2016, and was 2.75 percent on January 31, 2017.

In order to terminate the plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to terminate. The completed Resolution will allow the plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of the plan liabilities. CalPERS advises you to consult with the plan actuary before beginning this process.

Participant Data

The table below shows a summary of your plan's member data upon which this valuation is based:

	June 30, 2015	June 30, 2016
Reported Payroll	\$ 1,446,261	\$ 1,475,458
Projected Payroll for Contribution Purposes	\$ 1,580,368	\$ 1,612,273
Number of Members		
Active	18	18
Transferred	1	1
Separated	5	5
Retired	6	6

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- None

PLAN'S MAJOR BENEFIT OPTIONS

SECTION 1 – PLAN SPECIFIC INFORMATION FOR THE MISCELLANEOUS PLAN OF THE MID-PENINSULA WATER DISTRICT

Plan’s Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in Appendix B within Section 2 of this report.

Benefit Provision	Contract package	
	Active Misc	Receiving Misc
Benefit Formula	2.0% @ 55	
Social Security Coverage	Yes	
Full/Modified	Full	
Employee Contribution Rate	7.00%	
Final Average Compensation Period	Three Year	
Sick Leave Credit	Yes	
Non-Industrial Disability	Standard	
Industrial Disability	No	
Pre-Retirement Death Benefits		
Optional Settlement 2W	Yes	
1959 Survivor Benefit Level	No	
Special	No	
Alternate (firefighters)	No	No
Post-Retirement Death Benefits		
Lump Sum	\$500	\$500
Survivor Allowance (PRSA)	No	No
COLA	2%	2%

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

**Section 2 may be found on the CalPERS website
(www.calpers.ca.gov) in the Forms and
Publications section**



Section 2

**ACTUARIAL VALUATION
as of June 30, 2016**

for CalPERS

MISCELLANEOUS RISK POOL

**REQUIRED CONTRIBUTIONS
FOR FISCAL YEAR**

July 1, 2018 – June 30, 2019

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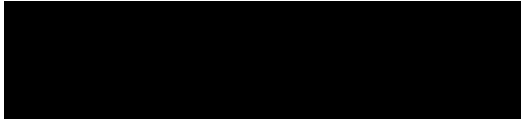
ACTUARIAL CERTIFICATION

To the best of our knowledge, this **Section 2** report is complete and accurate and contains sufficient information to disclose, fully and fairly, the funded condition of the Miscellaneous Risk Pool. This valuation is based on the member and financial data as of June 30, 2016 provided by the various CalPERS databases and the benefits under this Risk Pool with CalPERS as of the date this report was produced. In the opinion of the actuaries whose signatures appear below, the valuation has been performed in accordance with generally accepted actuarial principles, in accordance with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for this risk pool, as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

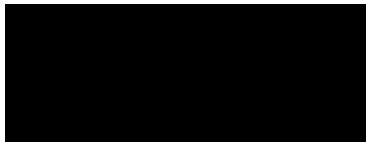
The undersigned are CalPERS staff actuaries, members of both the American Academy of Actuaries and the Society of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



SHELLY CHU, ASA, MAAA
Senior Pension Actuary, CalPERS
Pool Actuary



FRITZIE ARCHULETA, ASA, MAAA
Senior Pension Actuary, CalPERS
Reviewing Pool Actuary



CHEUK KIU (JET) AU, ASA
Associate Pension Actuary, CalPERS
Reviewing Pool Actuary

HIGHLIGHTS AND EXECUTIVE SUMMARY

- **INTRODUCTION**
- **PURPOSE OF SECTION 2**
- **RISK POOL'S REQUIRED EMPLOYER CONTRIBUTION**
- **RISK POOL'S NORMAL COST BY BENEFIT FORMULA**
- **FUNDED STATUS OF THE RISK POOL**
- **COST**
- **CHANGES SINCE THE PRIOR YEAR'S VALUATION**
- **SUBSEQUENT EVENTS**

Introduction

This Section 2 report presents the results of the June 30, 2016 actuarial valuation of the MISCELLANEOUS RISK POOL of the California Public Employees' Retirement System (CalPERS). This report shows the Fiscal Year 2018-19 required employer normal cost contribution rates for plans participating in the risk pool.

The actuarial assumptions and methods used in CalPERS public agency valuations are approved by the Board of Administration upon the recommendation of the Chief Actuary. The individual pool actuaries whose signatures appear in the actuarial certification in this report do not set pool actuarial assumptions.

Public Employees' Pension Reform Act of 2013 (PEPRA)

On January 1, 2013, the Public Employees' Pension Reform Act of 2013 (PEPRA) took effect. In addition to creating new retirement formulas for newly hired members, PEPRA also effectively closed all existing active risk pools to new employees. As such, it is no longer appropriate to assume that the payroll of the risk pools for the classic formulas will continue to grow at 3 percent annually. Funding the promised pension benefits as a percentage of payrolls would lead to the underfunding of the plans. In addition, the current allocation of the existing unfunded liabilities based on payroll would create equity issues for employers within the risk pools. Furthermore, the declining payroll of the classic formula risk pools will lead to unacceptable levels of employer contribution volatility.

In order to address these issues, the CalPERS Board of Administration approved at their May 21, 2014 meeting structural changes to the risk pools. All pooled plans are combined into two active risk pools: one for all miscellaneous groups and one for all safety groups. By combining the risk pools this way, the payroll of the risk pools and the employers within the risk pools can be expected to increase at the assumed 3 percent annual growth. This change will allow the continuation of the current level percent of payroll amortization schedule.

Purpose of Section 2

This Actuarial Valuation for the Miscellaneous Risk Pool of the California Public Employees' Retirement System (CalPERS) was performed by CalPERS' staff actuaries using data as of June 30, 2016 in order to:

- Set forth the actuarial assets and accrued liabilities of this risk pool as of June 30, 2016
- Determine the required contribution rate of the pool for the fiscal year July 1, 2018 through June 30, 2019
- Provide actuarial information as of June 30, 2016 to the CalPERS Board of Administration and other interested parties

The pension funding information presented in this report should not be used in financial reports subject to GASB Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available from CalPERS and details for ordering are available on our website.

The measurements shown in this actuarial valuation may not be applicable for other purposes. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; changes in actuarial policies; and changes in plan provisions or applicable law.

Risk Pool's Required Employer Contribution

		Fiscal Year 2017-18		Fiscal Year 2018-19
Contribution in Projected Dollars				
a) Risk Pool's Normal Cost	\$	343,450,092	\$	363,403,777
b) Employee Contribution		<u>148,636,149</u>		<u>154,192,108</u>
c) Risk Pool's Gross Employer Normal Cost [(a) - (b)]	\$	194,813,943	\$	209,211,669
d) Payment on Risk Pool's Amortization Bases		201,429,027		239,409,456
e) Total Required Employer Contribution* [(c) + (d)]	\$	396,242,970	\$	448,621,125
* Total may not add up due to rounding				

Risk Pool's Normal Cost by Benefit Formula

Normal Cost Contribution as Percentage of Projected Payroll for Fiscal Year 2018-19	Benefit Formula					
	2% at 62	2% at 60	2% at 55	2.5% at 55	2.7% at 55	3% at 60
1) Total Normal Cost Contribution	13.092%	14.546%	15.794%	17.970%	19.521%	20.535%
2) Expected Employee Contribution	<u>6.250%</u>	<u>6.912%</u>	<u>6.902%</u>	<u>7.948%</u>	<u>7.952%</u>	<u>7.776%</u>
3) Total Employer Normal Cost Base Benefit [(1)-(2)]	6.842%	7.634%	8.892%	10.022%	11.569%	12.759%

Class 1 benefits as provided in Appendix C-1 are in addition to these costs.

Funded Status of the Risk Pool

		June 30, 2015		June 30, 2016
1. Present Value of Projected Benefits	\$	16,443,159,457	\$	17,510,837,713
2. Entry Age Normal Accrued Liability	\$	13,889,938,645	\$	14,775,287,594
3. Market Value of Assets (MVA)	\$	10,919,134,771	\$	10,897,707,800
4. Unfunded Liability [(2) - (3)]		2,970,803,874		3,877,579,794
5. Funded Ratio [(3) / (2)]		78.6%		73.8%

The funded status shown above is the average for all plans in the risk pool. The funded status of an individual plan can be found in its Section 1 report.

This measure of funded status is an assessment of the need for future employer contributions based on the selected actuarial cost method used to fund the plans. The UAL is the present value of future employer contributions for service that has already been earned and is in addition to future normal cost contributions for active members. For a measure of funded status that is appropriate for assessing the sufficiency of plan assets to cover estimated termination liabilities, please see "Hypothetical Termination Liability" in the "Risk Analysis" section within the Section 1 reports.

Cost

Actuarial Cost Estimates in General

What is the cost of the pension plan?

Contributions to fund the pension plan are comprised of two components:

- The Normal Cost, expressed as a percentage of total active payroll.
- The Amortization of the Unfunded Accrued Liability (UAL), expressed as a dollar amount.

The Amortization of UAL component is expressed as a dollar amount and will be invoiced on a monthly basis. There will be an option to prepay this amount during July of each fiscal year.

The Normal Cost component will continue to be expressed as a percentage of active payroll with employer and employee contributions payable as part of the regular payroll reporting process.

The determination of both components requires complex actuarial calculations. The calculations are based on a set of actuarial assumptions which can be divided into two categories:

- Demographic assumptions (which includes mortality rates, retirement rates, employment termination rates, disability rates)
- Economic assumptions (which includes future investment earnings, inflation, salary growth rates)

These assumptions reflect CalPERS best estimate of the future experience of the plan and are long term in nature. We recognize that all the assumptions will not be realized in any given year. For example, the investment earnings at CalPERS have averaged 7.0 percent over the 20 years ending June 30, 2016, yet individual fiscal year returns have ranged from -24 percent to +21.7 percent. In addition, CalPERS reviews all the actuarial assumptions on an ongoing basis by conducting in depth experience studies every four years.

Changes since the Prior Year's Valuation

Actuarial Methods and Assumptions

On December 21, 2016, the CalPERS Board of Administration lowered the discount rate from 7.50 percent to 7.00 percent using a three year phase-in beginning with the June 30, 2016 actuarial valuations. The minimum employer contributions for Fiscal Year 2018-19 determined in this valuation were calculated using a discount rate of 7.375 percent. The projected employer contributions on Page 5 of the Section 1 reports are calculated assuming that the discount rate will be lowered to 7.25 percent next year and 7.00 percent the following year as adopted by the Board. The decision to reduce the discount rate was primarily based on reduced capital market assumptions provided by external investment consultants and CalPERS investment staff. The specific decision adopted by the Board reflected recommendations from CalPERS staff and additional input from employer and employee stakeholder groups. Based on the investment allocation adopted by the Board and capital market assumptions, the reduced discount rate assumption provides a more realistic assumption for the long term investment return of the fund.

Notwithstanding the Board's decision to phase into a 7.0 percent discount rate, subsequent analysis of the expected investment return of CalPERS assets or changes to the investment allocation may result in a change to this three year discount rate schedule. A comprehensive analysis of all actuarial assumptions and methods including the discount rate will be conducted in 2017.

Subsequent Events

The contribution requirements determined in this actuarial valuation report are based on demographic and financial information as of June 30, 2016. Changes in the value of assets subsequent to that date are not reflected. Declines in asset values will increase the required contribution, while investment returns above the assumed rate of return will decrease the actuarial cost of the plan.

This actuarial valuation report reflects statutory changes, regulatory changes and CalPERS Board actions through January 2017. Any subsequent changes or actions are not reflected.

ASSETS

- **RECONCILIATION OF RISK POOL'S MARKET VALUE OF ASSETS**
- **ASSET ALLOCATION**
- **CALPERS HISTORY OF INVESTMENT RETURNS**

Reconciliation of Risk Pool's Market Value of Assets

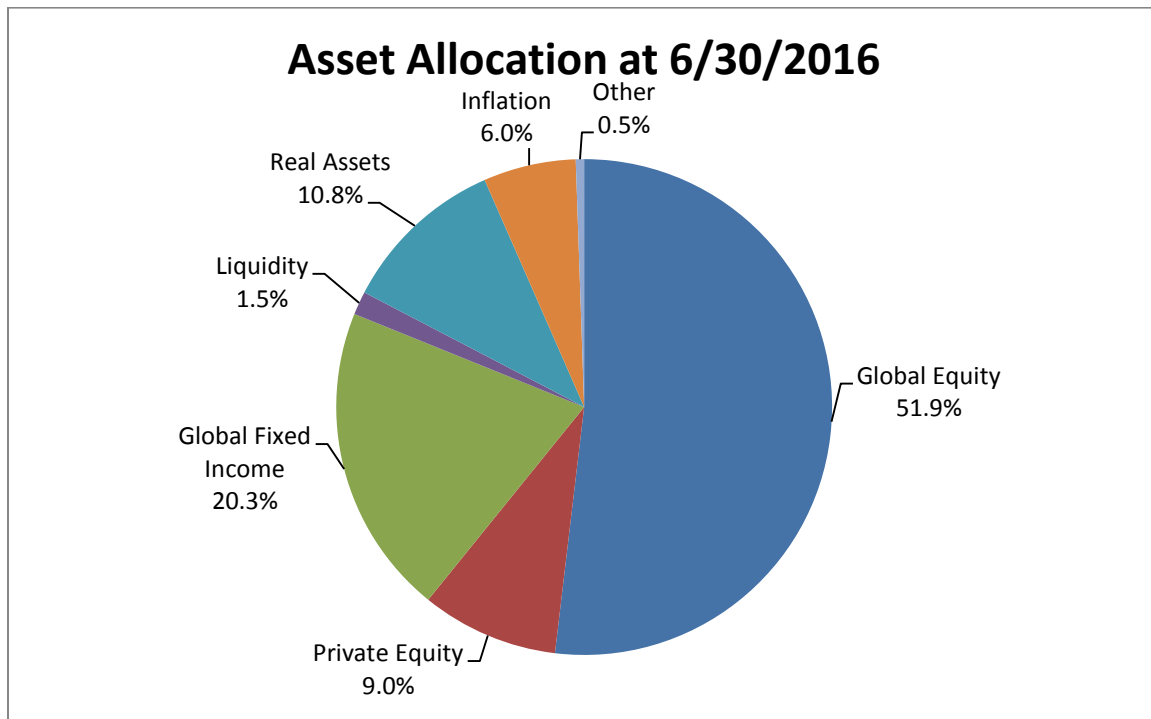
1. Market Value of Assets as of June 30, 2015 Including Receivables	\$	10,919,134,771
2. Change in Receivables for Service Buybacks		(3,543,886)
3. Employer Contributions		406,781,720
4. Employee Contributions		155,520,980
5. Benefit Payments to Retirees and Beneficiaries		(600,042,112)
6. Refunds		(14,425,517)
7. Lump Sum Payments		0
8. Transfers and Miscellaneous Adjustments		(8,830,024)
9. Investment Return		<u>43,111,868</u>
10. Market Value of Assets as of June 30, 2016 Including Receivables	\$	10,897,707,800

Asset Allocation

CalPERS adheres to an Asset Allocation Strategy which establishes asset class allocation policy targets and ranges, and manages those asset class allocations within their policy ranges. CalPERS Investment Belief No. 6 recognizes that strategic asset allocation is the dominant determinant of portfolio risk and return. In June 2015, the CalPERS Board of Administration adopted new interim targets to the current asset allocation as shown in the Policy Target Allocation below expressed as a percentage of total assets.

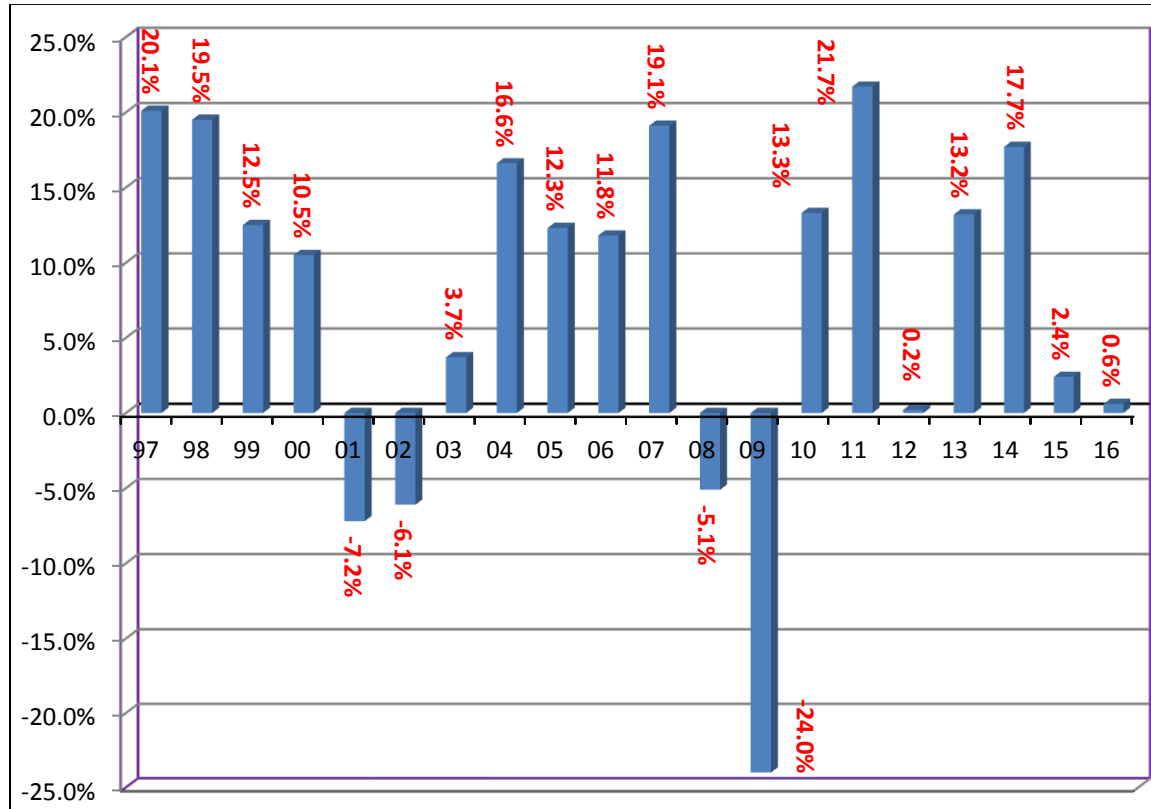
The asset allocation and market value of assets shown below reflect the values of the Public Employees' Retirement Fund (PERF) in its entirety as of June 30, 2016.

(A) Asset Class	(B) Market Value (\$ Billion)	(C) Policy Target Allocation
Global Equity	153.1	51.0%
Private Equity	26.4	10.0%
Global Fixed Income	59.9	20.0%
Liquidity	4.5	1.0%
Real Assets	31.8	12.0%
Inflation Sensitive Assets	17.8	6.0%
Other	1.6	0.0%
Total Fund	\$295.1	100.0%



CalPERS History of Investment Returns

The following is a chart with the 20-year historical annual returns of the Public Employees Retirement Fund for each fiscal year ending on June 30. Beginning in 2002, the figures are reported as gross of fees.



The table below shows historical geometric mean annual returns of the Public Employees Retirement Fund for various time periods ending on June 30, 2016, (figures are reported as gross of fees). The geometric mean rate of return is the average rate per period compounded over multiple periods. It should be recognized that in any given year the rate of return is volatile. The portfolio has an expected volatility of 11.8 percent per year based on the most recent Asset Liability Model. The volatility is a measure of the risk of the portfolio expressed in the standard deviation of the fund's total return distribution, expressed as a percentage. Consequently, when looking at investment returns, it is more instructive to look at returns over longer time horizons.

History of CalPERS Geometric Mean Rates of Return and Volatilities					
	1 year	5 year	10 year	20 year	30 year
Geometric Return	0.6%	6.6%	5.0%	7.0%	8.2%
Volatility	—	8.1%	14.0%	11.8%	10.1%

LIABILITIES AND CONTRIBUTIONS

- **RISK POOL'S ACCRUED AND UNFUNDED LIABILITIES**
- **(GAIN)/LOSS ANALYSIS 06/30/15 - 06/30/16**
- **RISK POOL'S ANNUAL REQUIRED CONTRIBUTIONS**
- **RISK POOL'S CONTRIBUTION HISTORY**
- **FUNDING HISTORY**

Risk Pool's Accrued and Unfunded Liabilities

	June 30, 2015	June 30, 2016
1. Present Value of Projected Benefits		
a) Active Members	\$ 7,842,719,745	\$ 8,234,892,967
b) Transferred Members	1,065,562,358	1,151,305,295
c) Separated Members	392,411,377	412,562,586
d) Members and Beneficiaries Receiving Payments	<u>7,142,465,977</u>	<u>7,712,076,865</u>
e) Total	\$ 16,443,159,457	\$ 17,510,837,713
2. Present Value of Future Employer Normal Costs	\$ 1,389,285,891	\$ 1,512,368,958
3. Present Value of Future Employee Contributions	\$ 1,163,934,921	\$ 1,223,181,161
4. Entry Age Normal Accrued Liability		
a) Active Members [(1a) - (2) - (3)]	\$ 5,289,498,933	\$ 5,499,342,848
b) Transferred Members (1b)	1,065,562,358	1,151,305,295
c) Separated Members (1c)	392,411,377	412,562,586
d) Members and Beneficiaries Receiving Payments (1d)	<u>7,142,465,977</u>	<u>7,712,076,865</u>
e) Total	\$ 13,889,938,645	\$ 14,775,287,594
5. Market Value of Assets (MVA) Including Receivables	\$ 10,919,134,771	\$ 10,897,707,800
6. Unfunded Accrued Liability [(4e) - (5)]	2,970,803,874	3,877,579,794
7. Funded Ratio [(5) / (4e)]	78.6%	73.8%

(Gain)/Loss Analysis 06/30/15 - 06/30/16

To calculate the cost requirements of the pool, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year, actual experience is compared to the expected experience based on the actuarial assumptions. This results in actuarial gains or losses, as shown below.

1. Total (Gain)/Loss for the Year

a) Unfunded Accrued Liability (UAL) as of 06/30/15	\$ 2,970,803,874
b) Expected Payment on the UAL during FY 2015-16	211,365,896
c) Interest through 06/30/16 $[\cdot 075 \times (1a) - ((1.075)^{1/2} - 1) \times (1b)]$	215,027,361
d) Expected UAL before all other changes $[(1a) - (1b) + (1c)]$	2,974,465,339
e) Change due to plan Amendments	0
f) Change due to plan Golden Handshakes and Service Purchases	1,932,029
g) Transfers Out of Risk Pool	(555,805)
h) Transfers Into Risk Pool	0
i) Change due to assumption change	224,853,121
j) Expected UAL after all other changes $[(1d)+(1e)+(1f)-(1g)+(1h)+(1i)]$	3,201,806,294
k) Actual UAL as of 06/30/16	3,877,579,794
l) Total (Gain)/Loss for 2015-16 $[(1k) - (1j)]$	\$ 675,773,500

2. Asset (Gain)/Loss for the Year

a) Market Value of Assets as of 06/30/15, Including Receivables	\$ 10,919,134,771
b) Transfers Out of Pool	7,860,355
c) Transfers Into Pool	0
d) Adjusted MVA at beginning of year $[(2a) - (2b) + (2c)]$	10,911,274,416
e) Receivables PY	29,426,691
f) Receivables CY	25,882,805
g) Contributions Received	562,302,700
h) Benefits and Refunds Paid	(614,467,629)
i) Transfers and Miscellaneous Adjustments	(969,669)
j) Expected Int. $[\cdot 075 \times ((2d)-(2e)) + ((1.075)^{1/2} - 1) \times ((2g)+(2h)+(2i))]$	814,182,054
k) Expected Assets as of 06/30/15 $[(2d)-(2e)+(2f)+(2g)+(2h)+(2i)+(2j)]$	11,668,777,986
l) Market Value of Assets as of 06/30/16, Including Receivables	10,897,707,800
m) Asset (Gain)/Loss $[(2k) - (2l)]$	\$ 771,070,186

3. Liability (Gain)/Loss for the Year

a) Total (Gain)/Loss (1)	\$ 675,773,500
b) Asset (Gain)/Loss (2m)	771,070,186
c) Liability (Gain)/Loss $[(3a) - (3b)]$	\$ (95,296,686)

Items 1i, 2m, and 3c above were allocated on a proportional basis to each individual risk pooled plan. The allocation of each plan's share of the UAL is developed in Section 1 of the report.

Risk Pool's Annual Required Contributions

	Fiscal Year 2017-18	Fiscal Year 2018-19
1. Contribution in Projected Dollars		
a) Total Normal Cost	\$ 343,450,092	\$ 363,403,777
b) Employee Contribution	<u>148,636,149</u>	<u>154,192,108</u>
c) Risk Pool's Employer Normal Cost [(1a) - (1b)]	\$ 194,813,943	\$ 209,211,669
d) Payment on Pool's Amortization Bases	<u>201,429,027</u>	<u>239,409,456</u>
e) Total Required Employer Contributions [(1c) + (1d)]	\$ 396,242,970	\$ 448,621,125
2. Annual Covered Payroll as of Valuation Date	\$ 2,055,683,261	\$ 2,153,642,973
3. Projected Payroll for Contribution Fiscal Year	\$ 2,246,300,603	\$ 2,353,343,825

Risk Pool's Contribution History

Valuation Date	Total Employer Normal Cost	Payments on Risk Pool's Amortization Bases	Total Employer Contribution
06/30/2013	\$196,320,163	\$160,711,302	\$357,031,465
06/30/2014	\$191,941,367	\$175,416,476	\$367,357,843
06/30/2015	\$194,813,943	\$201,429,027	\$396,242,970
06/30/2016	\$209,211,669	\$239,409,456	\$448,621,125

Funding History

Valuation Date	Accrued Liabilities (AL)	Market Value of Assets (MVA)	Unfunded Accrued Liabilities (UAL)	Funded Ratio (MVA/AL)	Annual Covered Payroll	UAL as a % of Payroll
06/30/2013	\$11,805,627,557	\$9,093,458,815	\$2,712,168,742	77.0%	\$1,909,639,449	142.0%
06/30/2014	\$13,137,020,035	\$10,686,754,939	\$2,450,265,096	81.3%	\$1,982,241,289	123.6%
06/30/2015	\$13,889,938,645	\$10,919,134,771	\$2,970,803,874	78.6%	\$2,055,683,261	144.5%
06/30/2016	\$14,775,287,594	\$10,897,707,800	\$3,877,579,794	73.8%	\$2,153,642,973	180.0%

APPENDICES

- **APPENDIX A - ACTUARIAL METHODS AND ASSUMPTIONS**
- **APPENDIX B - PRINCIPAL PLAN PROVISIONS**
- **APPENDIX C - CLASSIFICATION OF OPTIONAL BENEFITS**
- **APPENDIX D - PARTICIPANT DATA**
- **APPENDIX E - GLOSSARY OF ACTUARIAL TERMS**

APPENDIX A

ACTUARIAL METHODS AND ASSUMPTIONS

- **ACTUARIAL DATA**
- **ACTUARIAL METHODS**
- **ACTUARIAL ASSUMPTIONS**
- **MISCELLANEOUS**

Actuarial Data

As stated in the Actuarial Certification, the data which serves as the basis of this valuation has been obtained from the various CalPERS databases. We have reviewed the valuation data and believe that it is reasonable and appropriate in aggregate. We are unaware of any potential data issues that would have a material effect on the results of this valuation, except that data does not always contain the latest salary information for former members now in reciprocal systems and does not recognize the potential for unusually large salary deviation in certain cases such as elected officials. Therefore, salary information in these cases may not be accurate. These situations are relatively infrequent, however, and when they do occur, they generally do not have a material impact on required employer contributions.

Actuarial Methods

Actuarial Cost Method

The actuarial cost method used is the Entry Age Normal Cost Method. Under this method, projected benefits are determined for all members and the associated liabilities are spread in a manner that produces level annual cost as a percentage of pay in each year from the member's age of hire (entry age) to their assumed retirement age on the valuation date. The cost allocated to the current fiscal year is called the normal cost.

The actuarial accrued liability for active members is then calculated as the portion of the total cost of the plan allocated to prior years. The actuarial accrued liability for members currently receiving benefits and for members entitled to deferred benefits is equal to the present value of the benefits expected to be paid. No normal costs are applicable for these participants.

Amortization of Unfunded Actuarial Accrued Liability

The excess of the total actuarial accrued liability over the market value of plan assets is called the unfunded actuarial accrued liability (UAL). Funding requirements are determined by adding the normal cost and an amortization payment toward the unfunded liability. The unfunded liability is amortized as a "level percent of pay". Commencing with the June 30, 2013 valuation, all new gains or losses are amortized over a fixed 30-year period with a 5-year ramp up at the beginning and a 5-year ramp down at the end of the amortization period. All changes in liability due to plan amendments (other than golden handshakes) are amortized over a 20-year period with no ramp. Changes in actuarial assumptions or changes in actuarial methodology are amortized over a 20-year period with a 5-year ramp up at the beginning and a 5-year ramp down at the end of the amortization period. Changes in unfunded accrued liability due to a Golden Handshake will be amortized over a period of five years.

The 5-year ramp up means that the payments in the first four years of the amortization period are 20 percent, 40 percent, 60 percent and 80 percent of the "full" payment which begins in year five. The 5-year ramp down means that the reverse is true in the final four years of the amortization period.

Exceptions for Inconsistencies:

An exception to the amortization rules above is used whenever their application results in inconsistencies. In these cases, a "fresh start" approach is used. This means that the current unfunded actuarial liability is projected and amortized over a set number of years. For example, a fresh start is needed in the following situations:

- 1) When a positive payment would be required on a negative unfunded actuarial liability (or conversely a negative payment on a positive unfunded actuarial liability); or
- 2) When there are excess assets, rather than an unfunded liability. In this situation, a 30-year fresh start is used.

It should be noted that the actuary may determine that a fresh start is necessary under other circumstances. In all cases of a fresh start, the period is set by the actuary at what is deemed appropriate; however, the period will not be greater than 30 years.

Exceptions for Inactive Plans:

The following exceptions apply to plans classified as Inactive. These plans have no active members and no expectation to have active members in the future.

- Amortization of the unfunded liability is on a "level dollar" basis rather than a "level percent of pay" basis. For amortization layers which utilize a ramp up and ramp down, the "ultimate" payment is constant.
- Actuarial judgment will be used to shorten amortization periods for Inactive plans with existing periods that are deemed too long given the duration of the liability. The specific demographics of the plan will be used to determine if shorter periods may be more appropriate.

Asset Valuation Method

It is the policy of the CalPERS Board of Administration to use professionally accepted amortization methods to eliminate a surplus or an unfunded accrued liability in a manner that maintains benefit security for the members of the System while minimizing substantial variations in required employer contributions. On April 17, 2013, the CalPERS Board of Administration approved a recommendation to change the CalPERS amortization and rate smoothing policies. Beginning with the June 30, 2013 valuations that set the employer contribution for Fiscal Year 2015-16, CalPERS employs a policy that amortizes all gains and losses over a fixed 30-year period. The increase or decrease in the rate is then spread directly over a 5-year period. This method is referred to as "direct rate smoothing." CalPERS no longer uses an actuarial value of assets and only uses the market value of assets. The direct rate smoothing method is equivalent to a method using a 5 year asset smoothing period with no actuarial value of asset corridor and a 25-year amortization period for gains and losses.

PEPRA Normal Cost Rate Methodology

Per Government Code Section 7522.30(b) the "normal cost rate" shall mean the annual actuarially determined normal cost for the plan of retirement benefits provided to the new member, and shall be established based on actuarial assumptions used to determine the liabilities and costs as part of the annual actuarial valuation. The plan of retirement benefits shall include any elements that would impact the actuarial determination of the normal cost, including, but not limited to, the retirement formula, eligibility and vesting criteria, ancillary benefit provisions, and any automatic cost-of-living adjustments as determined by the public retirement system. The total PEPRA normal cost will be calculated using all active members within a pooled plan.

Actuarial Assumptions

In 2014, CalPERS completed a 2-year asset liability management study incorporating actuarial assumptions and strategic asset allocation. On February 19, 2014, the CalPERS Board of Administration adopted relatively modest changes to the asset allocation that reduced the expected volatility of returns. The adopted asset allocation was expected to have a long-term blended return that continued to support a discount rate assumption of 7.5 percent at that time. The Board also approved several changes to the demographic assumptions that more closely aligned with actual experience. The most significant of these is mortality improvement to acknowledge the greater life expectancies we are seeing in our membership and expected continued improvements. These new actuarial assumptions were first used in the June 30, 2014 valuation to set the Fiscal Year 2016-17 contribution for public agency employers.

On December 21, 2016, the CalPERS Board of Administration lowered the discount rate from 7.50 percent to 7.00 percent using a three year phase-in beginning with the June 30, 2016 actuarial valuations. The minimum employer contributions for Fiscal Year 2018-19 determined in this valuation were calculated using a discount rate of 7.375 percent. The projected employer contributions on Page 5 are calculated assuming that the discount rate will be lowered to 7.25 percent next year and 7.00 percent the following year as adopted by the Board. The decision to reduce the discount rate was primarily based on reduced capital market assumptions provided by external investment consultants and CalPERS investment staff. The specific decision adopted by the Board reflected recommendations from CalPERS staff and additional input from employer and employee stakeholder groups. Based on the investment allocation adopted by the Board and capital market assumptions, the reduced discount rate schedule provides a more realistic assumption for the long term investment return of the fund.

Notwithstanding the Board's decision to phase into a 7.0 percent discount rate, subsequent analysis of the expected investment return of CalPERS assets or changes to the investment allocation may result in a change to this three year discount rate schedule. A comprehensive analysis of all actuarial assumptions and methods including the discount rate will be conducted in 2017.

For more details and additional rationale for the selection of the actuarial assumptions, please refer to the CalPERS Experience Study and Review of Actuarial Assumptions report from January 2014 that can be found on the CalPERS website under: "Forms and Publications". Click on "View All" and search for Experience Study.

All actuarial assumptions (except the discount rates used for the hypothetical termination liability) represent an estimate of future experience rather than observations of the estimates inherent in market data.

Economic Assumptions

Discount Rate

The prescribed discount rate assumption adopted by the Board on December 21, 2016 is 7.375 percent compounded annually (net of investment and administrative expenses) as of 6/30/2016.

The Board also prescribed that the assumed discount rate will reduce to 7.25 percent compounded annually (net of expenses) as of 6/30/2017, and 7.0 percent compounded annually (net of expenses) as of 6/30/2018. These further changes to the discount rate assumption are not reflected in the determination of required contributions determined in this report for Fiscal Year 2018-19.

Termination Liability Discount Rate

The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date.

The hypothetical termination liabilities in this report are calculated using an observed range of market interest rates. This range is based on the lowest and highest 20-year Treasury bond observed during an approximate 2-year period centered around the valuation date. The 20-year Treasury bond has a similar duration to most plan liabilities and serves as a good proxy for the termination discount rate. The 20-year Treasury yield was 1.75 percent on June 30, 2016.

Salary Growth

Annual increases vary by category, entry age, and duration of service. A sample of assumed increases is shown below.

Public Agency Miscellaneous

<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1220	0.1160	0.1020
1	0.0990	0.0940	0.0830
2	0.0860	0.0810	0.0710
3	0.0770	0.0720	0.0630
4	0.0700	0.0650	0.0570
5	0.0640	0.0600	0.0520
10	0.0460	0.0430	0.0390
15	0.0420	0.0400	0.0360
20	0.0390	0.0380	0.0340
25	0.0370	0.0360	0.0330
30	0.0350	0.0340	0.0320

Public Agency Fire

<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.2000	0.1980	0.1680
1	0.1490	0.1460	0.1250
2	0.1200	0.1160	0.0990
3	0.0980	0.0940	0.0810
4	0.0820	0.0780	0.0670
5	0.0690	0.0640	0.0550
10	0.0470	0.0460	0.0420
15	0.0440	0.0420	0.0390
20	0.0420	0.0390	0.0360
25	0.0400	0.0370	0.0340
30	0.0380	0.0360	0.0340

Public Agency Police

<u>Duration of Service</u>	<u>(Entry Age 20)</u>	<u>(Entry Age 30)</u>	<u>(Entry Age 40)</u>
0	0.1500	0.1470	0.1310
1	0.1160	0.1120	0.1010
2	0.0950	0.0920	0.0830
3	0.0810	0.0780	0.0700
4	0.0700	0.0670	0.0600
5	0.0610	0.0580	0.0520
10	0.0450	0.0430	0.0370
15	0.0450	0.0430	0.0370
20	0.0450	0.0430	0.0370
25	0.0450	0.0430	0.0370
30	0.0450	0.0430	0.0370

Public Agency County Peace Officers

Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.1770	0.1670	0.1500
1	0.1340	0.1260	0.1140
2	0.1080	0.1030	0.0940
3	0.0900	0.0860	0.0790
4	0.0760	0.0730	0.0670
5	0.0650	0.0620	0.0580
10	0.0470	0.0450	0.0410
15	0.0460	0.0450	0.0390
20	0.0460	0.0450	0.0380
25	0.0460	0.0450	0.0380
30	0.0460	0.0440	0.0380

Schools

Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.0900	0.0880	0.0820
1	0.0780	0.0750	0.0700
2	0.0700	0.0680	0.0630
3	0.0650	0.0630	0.0580
4	0.0610	0.0590	0.0540
5	0.0580	0.0560	0.0510
10	0.0460	0.0450	0.0410
15	0.0420	0.0410	0.0380
20	0.0390	0.0380	0.0350
25	0.0370	0.0350	0.0330
30	0.0350	0.0330	0.0310

- The Miscellaneous salary scale is used for Local Prosecutors.
- The Police salary scale is used for Other Safety, Local Sheriff, and School Police.

Overall Payroll Growth

3.00 percent compounded annually (used in projecting the payroll over which the unfunded liability is amortized). This assumption is used for all plans.

Inflation

2.75 percent compounded annually. This assumption is used for all plans.

Non-valued Potential Additional Liabilities

The potential liability loss for a cost-of-living increase exceeding the 2.75 percent inflation assumption, and any potential liability loss from future member service purchases are not reflected in the valuation.

Miscellaneous Loading Factors

Credit for Unused Sick Leave

Total years of service is increased by 1 percent for those plans that have accepted the provision providing Credit for Unused Sick Leave.

Conversion of Employer Paid Member Contributions (EPMC)

Total years of service is increased by the Employee Contribution Rate for those plans with the provision providing for the Conversion of Employer Paid Member Contributions (EPMC) during the final compensation period.

Norris Decision (Best Factors)

Employees hired prior to July 1, 1982 have projected benefit amounts increased in order to reflect the use of "Best Factors" in the calculation of optional benefit forms. This is due to a 1983 Supreme Court decision, known as the Norris decision, which required males and females to be treated equally in the determination of benefit amounts. Consequently, anyone already employed at that time is given the best possible conversion factor when optional benefits are determined. No loading is necessary for employees hired after July 1, 1982.

Hypothetical Termination Liability

The hypothetical termination liabilities include a 7 percent contingency load. This load is for unforeseen improvements in mortality.

Demographic Assumptions

Pre-Retirement Mortality

Non-Industrial Death Rates vary by age and gender. Industrial Death rates vary by age. See sample rates in table below. The non-industrial death rates are used for all plans. The industrial death rates are used for Safety Plans (except for Local Prosecutor safety members where the corresponding Miscellaneous Plan does not have the Industrial Death Benefit).

Age	Non-Industrial Death (Not Job-Related)		Industrial Death (Job-Related)
	Male	Female	Male and Female
20	0.00031	0.00020	0.00003
25	0.00040	0.00023	0.00007
30	0.00049	0.00025	0.00010
35	0.00057	0.00035	0.00012
40	0.00075	0.00050	0.00013
45	0.00106	0.00071	0.00014
50	0.00155	0.00100	0.00015
55	0.00228	0.00138	0.00016
60	0.00308	0.00182	0.00017
65	0.00400	0.00257	0.00018
70	0.00524	0.00367	0.00019
75	0.00713	0.00526	0.00020
80	0.00990	0.00814	0.00021

Miscellaneous Plans usually have Industrial Death rates set to zero unless the agency has specifically contracted for Industrial Death benefits. If so, each Non-Industrial Death rate shown above will be split into two components; 99 percent will become the Non-Industrial Death rate and 1 percent will become the Industrial Death rate.

Post-Retirement Mortality

Rates vary by age, type of retirement, and gender. See sample rates in table below. These rates are used for all plans.

Age	Healthy Recipients		Non-Industrially Disabled (Not Job-Related)		Industrially Disabled (Job-Related)	
	Male	Female	Male	Female	Male	Female
50	0.00501	0.00466	0.01680	0.01158	0.00501	0.00466
55	0.00599	0.00416	0.01973	0.01149	0.00599	0.00416
60	0.00710	0.00436	0.02289	0.01235	0.00754	0.00518
65	0.00829	0.00588	0.02451	0.01607	0.01122	0.00838
70	0.01305	0.00993	0.02875	0.02211	0.01635	0.01395
75	0.02205	0.01722	0.03990	0.03037	0.02834	0.02319
80	0.03899	0.02902	0.06083	0.04725	0.04899	0.03910
85	0.06969	0.05243	0.09731	0.07762	0.07679	0.06251
90	0.12974	0.09887	0.14804	0.12890	0.12974	0.09887
95	0.22444	0.18489	0.22444	0.21746	0.22444	0.18489
100	0.32536	0.30017	0.32536	0.30017	0.32536	0.30017
105	0.58527	0.56093	0.58527	0.56093	0.58527	0.56093
110	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

The post-retirement mortality rates above include 20 years of projected on-going mortality improvement using Scale BB published by the Society of Actuaries.

Marital Status

For active members, a percentage who are married upon retirement is assumed according to member category, as shown in the following table.

Member Category	Percent Married
Miscellaneous Member	85%
Local Police	90%
Local Fire	90%
Other Local Safety	90%
School Police	90%

Age of Spouse

It is assumed that female spouses are 3 years younger than male spouses. This assumption is used for all plans.

Terminated Members

It is assumed that terminated members refund immediately if non-vested. Terminated members who are vested are assumed to follow the same service retirement pattern as active members, but with a load to reflect the expected higher rates of retirement, especially at lower ages. The following table shows the load factors that are applied to the service retirement assumption for active members to obtain the service retirement pattern for separated vested members:

Age	Load Factor Miscellaneous	Load Factor Safety
50	190%	310%
51	110%	190%
52	110%	105%
53 through 54	100%	105%
55	100%	140%
56 and above	100% (no change)	100% (no change)

Termination with Refund

Rates vary by entry age and service for Miscellaneous Plans. Rates vary by service for Safety Plans. See sample rates in tables below.

Public Agency Miscellaneous

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40	Entry Age 45
0	0.1742	0.1674	0.1606	0.1537	0.1468	0.1400
1	0.1545	0.1477	0.1409	0.1339	0.1271	0.1203
2	0.1348	0.1280	0.1212	0.1142	0.1074	0.1006
3	0.1151	0.1083	0.1015	0.0945	0.0877	0.0809
4	0.0954	0.0886	0.0818	0.0748	0.0680	0.0612
5	0.0212	0.0193	0.0174	0.0155	0.0136	0.0116
10	0.0138	0.0121	0.0104	0.0088	0.0071	0.0055
15	0.0060	0.0051	0.0042	0.0032	0.0023	0.0014
20	0.0037	0.0029	0.0021	0.0013	0.0005	0.0001
25	0.0017	0.0011	0.0005	0.0001	0.0001	0.0001
30	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001
35	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Public Agency Safety

Duration of Service	Fire	Police	County Peace Officer
0	0.0710	0.1013	0.0997
1	0.0554	0.0636	0.0782
2	0.0398	0.0271	0.0566
3	0.0242	0.0258	0.0437
4	0.0218	0.0245	0.0414
5	0.0029	0.0086	0.0145
10	0.0009	0.0053	0.0089
15	0.0006	0.0027	0.0045
20	0.0005	0.0017	0.0020
25	0.0003	0.0012	0.0009
30	0.0003	0.0009	0.0006
35	0.0003	0.0009	0.0006

The Police Termination and Refund rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff, and School Police.

Schools

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40	Entry Age 45
0	0.1730	0.1627	0.1525	0.1422	0.1319	0.1217
1	0.1585	0.1482	0.1379	0.1277	0.1174	0.1071
2	0.1440	0.1336	0.1234	0.1131	0.1028	0.0926
3	0.1295	0.1192	0.1089	0.0987	0.0884	0.0781
4	0.1149	0.1046	0.0944	0.0841	0.0738	0.0636
5	0.0278	0.0249	0.0221	0.0192	0.0164	0.0135
10	0.0172	0.0147	0.0122	0.0098	0.0074	0.0049
15	0.0115	0.0094	0.0074	0.0053	0.0032	0.0011
20	0.0073	0.0055	0.0038	0.0020	0.0002	0.0002
25	0.0037	0.0023	0.0010	0.0002	0.0002	0.0002
30	0.0015	0.0003	0.0002	0.0002	0.0002	0.0002
35	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

Termination with Vested Benefits

Rates vary by entry age and service for Miscellaneous Plans. Rates vary by service for Safety Plans. See sample rates in tables below.

Public Agency Miscellaneous

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40
5	0.0656	0.0597	0.0537	0.0477	0.0418
10	0.0530	0.0466	0.0403	0.0339	0.0000
15	0.0443	0.0373	0.0305	0.0000	0.0000
20	0.0333	0.0261	0.0000	0.0000	0.0000
25	0.0212	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000

Public Agency Safety

Duration of Service	Fire	Police	County Peace Officer
5	0.0162	0.0163	0.0265
10	0.0061	0.0126	0.0204
15	0.0058	0.0082	0.0130
20	0.0053	0.0065	0.0074
25	0.0047	0.0058	0.0043
30	0.0045	0.0056	0.0030
35	0.0000	0.0000	0.0000

- When a member is eligible to retire, the termination with vested benefits probability is set to zero.
- After termination with vested benefits, a miscellaneous member is assumed to retire at age 59 and a safety member at age 54.
- The Police Termination with vested benefits rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff, and School Police.

Schools

Duration of Service	Entry Age 20	Entry Age 25	Entry Age 30	Entry Age 35	Entry Age 40
5	0.0816	0.0733	0.0649	0.0566	0.0482
10	0.0629	0.0540	0.0450	0.0359	0.0000
15	0.0537	0.0440	0.0344	0.0000	0.0000
20	0.0420	0.0317	0.0000	0.0000	0.0000
25	0.0291	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000

Non-Industrial (Not Job-Related) Disability

Rates vary by age and gender for Miscellaneous Plans. Rates vary by age and category for Safety Plans.

Age	Miscellaneous		Fire	Police	County Peace Officer	Schools	
	Male	Female	Male and Female	Male and Female	Male and Female	Male	Female
20	0.0002	0.0001	0.0001	0.0001	0.0001	0.0003	0.0003
25	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
30	0.0002	0.0002	0.0001	0.0002	0.0001	0.0001	0.0002
35	0.0005	0.0008	0.0001	0.0003	0.0004	0.0005	0.0004
40	0.0012	0.0016	0.0001	0.0004	0.0007	0.0015	0.0010
45	0.0019	0.0022	0.0002	0.0005	0.0013	0.0030	0.0019
50	0.0021	0.0023	0.0005	0.0008	0.0018	0.0039	0.0024
55	0.0022	0.0018	0.0010	0.0013	0.0010	0.0036	0.0021
60	0.0022	0.0014	0.0015	0.0020	0.0006	0.0031	0.0014

- The Miscellaneous Non-Industrial Disability rates are used for Local Prosecutors.
- The Police Non-Industrial Disability rates are also used for Other Safety, Local Sheriff, and School Police.

Industrial (Job-Related) Disability

Rates vary by age and category.

Age	Fire	Police	County Peace Officer
20	0.0001	0.0000	0.0004
25	0.0003	0.0017	0.0013
30	0.0007	0.0048	0.0025
35	0.0016	0.0079	0.0037
40	0.0030	0.0110	0.0051
45	0.0053	0.0141	0.0067
50	0.0277	0.0185	0.0092
55	0.0409	0.0479	0.0151
60	0.0583	0.0602	0.0174

- The Police Industrial Disability rates are also used for Local Sheriff and Other Safety.
- Fifty Percent of the Police Industrial Disability rates are used for School Police.
- One Percent of the Police Industrial Disability rates are used for Local Prosecutors.
- Normally, rates are zero for Miscellaneous Plans unless the agency has specifically contracted for Industrial Disability benefits. If so, each miscellaneous non-industrial disability rate will be split into two components: 50 percent will become the Non-Industrial Disability rate and 50 percent will become the Industrial Disability rate.

Service Retirement

Retirement rates vary by age, service, and formula, except for the safety ½ @ 55 and 2% @ 55 formulas, where retirement rates vary by age only.

Service Retirement

Public Agency Miscellaneous 1.5% @ 65

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.008	0.011	0.013	0.015	0.017	0.019
51	0.007	0.010	0.012	0.013	0.015	0.017
52	0.010	0.014	0.017	0.019	0.021	0.024
53	0.008	0.012	0.015	0.017	0.019	0.022
54	0.012	0.016	0.019	0.022	0.025	0.028
55	0.018	0.025	0.031	0.035	0.038	0.043
56	0.015	0.021	0.025	0.029	0.032	0.036
57	0.020	0.028	0.033	0.038	0.043	0.048
58	0.024	0.033	0.040	0.046	0.052	0.058
59	0.028	0.039	0.048	0.054	0.060	0.067
60	0.049	0.069	0.083	0.094	0.105	0.118
61	0.062	0.087	0.106	0.120	0.133	0.150
62	0.104	0.146	0.177	0.200	0.223	0.251
63	0.099	0.139	0.169	0.191	0.213	0.239
64	0.097	0.136	0.165	0.186	0.209	0.233
65	0.140	0.197	0.240	0.271	0.302	0.339
66	0.092	0.130	0.157	0.177	0.198	0.222
67	0.129	0.181	0.220	0.249	0.277	0.311
68	0.092	0.129	0.156	0.177	0.197	0.221
69	0.092	0.130	0.158	0.178	0.199	0.224
70	0.103	0.144	0.175	0.198	0.221	0.248

Public Agency Miscellaneous 2% @ 60

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.010	0.013	0.015	0.018	0.019	0.021
51	0.009	0.011	0.014	0.016	0.017	0.019
52	0.011	0.014	0.017	0.020	0.022	0.024
53	0.010	0.012	0.015	0.017	0.020	0.021
54	0.015	0.019	0.023	0.025	0.029	0.031
55	0.022	0.029	0.035	0.040	0.045	0.049
56	0.018	0.024	0.028	0.033	0.036	0.040
57	0.024	0.032	0.038	0.043	0.049	0.053
58	0.027	0.036	0.043	0.049	0.055	0.061
59	0.033	0.044	0.054	0.061	0.068	0.076
60	0.056	0.077	0.092	0.105	0.117	0.130
61	0.071	0.097	0.118	0.134	0.149	0.166
62	0.117	0.164	0.198	0.224	0.250	0.280
63	0.122	0.171	0.207	0.234	0.261	0.292
64	0.114	0.159	0.193	0.218	0.244	0.271
65	0.150	0.209	0.255	0.287	0.321	0.358
66	0.114	0.158	0.192	0.217	0.243	0.270
67	0.141	0.196	0.238	0.270	0.301	0.337
68	0.103	0.143	0.174	0.196	0.219	0.245
69	0.109	0.153	0.185	0.209	0.234	0.261
70	0.117	0.162	0.197	0.222	0.248	0.277

Service Retirement

Public Agency Miscellaneous 2% @ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.014	0.018	0.021	0.025	0.027	0.031
51	0.012	0.014	0.017	0.020	0.021	0.025
52	0.013	0.017	0.019	0.023	0.025	0.028
53	0.015	0.020	0.023	0.027	0.030	0.034
54	0.026	0.033	0.038	0.045	0.051	0.059
55	0.048	0.061	0.074	0.088	0.100	0.117
56	0.042	0.053	0.063	0.075	0.085	0.100
57	0.044	0.056	0.067	0.081	0.091	0.107
58	0.049	0.062	0.074	0.089	0.100	0.118
59	0.057	0.072	0.086	0.103	0.118	0.138
60	0.067	0.086	0.103	0.123	0.139	0.164
61	0.081	0.103	0.124	0.148	0.168	0.199
62	0.116	0.147	0.178	0.214	0.243	0.288
63	0.114	0.144	0.174	0.208	0.237	0.281
64	0.108	0.138	0.166	0.199	0.227	0.268
65	0.155	0.197	0.238	0.285	0.325	0.386
66	0.132	0.168	0.203	0.243	0.276	0.328
67	0.122	0.155	0.189	0.225	0.256	0.304
68	0.111	0.141	0.170	0.204	0.232	0.274
69	0.114	0.144	0.174	0.209	0.238	0.282
70	0.130	0.165	0.200	0.240	0.272	0.323

Public Agency Miscellaneous 2.5% @ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.004	0.009	0.019	0.029	0.049	0.094
51	0.004	0.009	0.019	0.029	0.049	0.094
52	0.004	0.009	0.020	0.030	0.050	0.095
53	0.008	0.014	0.025	0.036	0.058	0.104
54	0.024	0.034	0.050	0.066	0.091	0.142
55	0.066	0.088	0.115	0.142	0.179	0.241
56	0.042	0.057	0.078	0.098	0.128	0.184
57	0.041	0.057	0.077	0.097	0.128	0.183
58	0.045	0.061	0.083	0.104	0.136	0.192
59	0.055	0.074	0.098	0.123	0.157	0.216
60	0.066	0.088	0.115	0.142	0.179	0.241
61	0.072	0.095	0.124	0.153	0.191	0.255
62	0.099	0.130	0.166	0.202	0.248	0.319
63	0.092	0.121	0.155	0.189	0.233	0.302
64	0.091	0.119	0.153	0.187	0.231	0.299
65	0.122	0.160	0.202	0.245	0.297	0.374
66	0.138	0.179	0.226	0.272	0.329	0.411
67	0.114	0.149	0.189	0.229	0.279	0.354
68	0.100	0.131	0.168	0.204	0.250	0.322
69	0.114	0.149	0.189	0.229	0.279	0.354
70	0.127	0.165	0.209	0.253	0.306	0.385

Service Retirement

Public Agency Miscellaneous 2.7% @ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.004	0.009	0.014	0.035	0.055	0.095
51	0.002	0.006	0.011	0.030	0.050	0.090
52	0.006	0.012	0.017	0.038	0.059	0.099
53	0.010	0.017	0.024	0.046	0.068	0.110
54	0.032	0.044	0.057	0.085	0.113	0.160
55	0.076	0.101	0.125	0.165	0.205	0.265
56	0.055	0.074	0.093	0.127	0.160	0.214
57	0.050	0.068	0.086	0.118	0.151	0.204
58	0.055	0.074	0.093	0.127	0.161	0.215
59	0.061	0.082	0.102	0.138	0.174	0.229
60	0.069	0.093	0.116	0.154	0.192	0.250
61	0.086	0.113	0.141	0.183	0.225	0.288
62	0.105	0.138	0.171	0.218	0.266	0.334
63	0.103	0.135	0.167	0.215	0.262	0.329
64	0.109	0.143	0.177	0.226	0.275	0.344
65	0.134	0.174	0.215	0.270	0.326	0.401
66	0.147	0.191	0.235	0.294	0.354	0.433
67	0.121	0.158	0.196	0.248	0.300	0.372
68	0.113	0.147	0.182	0.232	0.282	0.352
69	0.117	0.153	0.189	0.240	0.291	0.362
70	0.141	0.183	0.226	0.283	0.341	0.418

Public Agency Miscellaneous 3% @ 60

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.012	0.018	0.024	0.039	0.040	0.091
51	0.009	0.014	0.019	0.034	0.034	0.084
52	0.014	0.020	0.026	0.043	0.044	0.096
53	0.016	0.023	0.031	0.048	0.050	0.102
54	0.026	0.036	0.045	0.065	0.070	0.125
55	0.043	0.057	0.072	0.096	0.105	0.165
56	0.042	0.056	0.070	0.094	0.103	0.162
57	0.049	0.065	0.082	0.108	0.119	0.180
58	0.057	0.076	0.094	0.122	0.136	0.199
59	0.076	0.100	0.123	0.157	0.175	0.244
60	0.114	0.148	0.182	0.226	0.255	0.334
61	0.095	0.123	0.152	0.190	0.214	0.288
62	0.133	0.172	0.211	0.260	0.294	0.378
63	0.129	0.166	0.204	0.252	0.285	0.368
64	0.143	0.185	0.226	0.278	0.315	0.401
65	0.202	0.260	0.318	0.386	0.439	0.542
66	0.177	0.228	0.279	0.340	0.386	0.482
67	0.151	0.194	0.238	0.292	0.331	0.420
68	0.139	0.179	0.220	0.270	0.306	0.391
69	0.190	0.245	0.299	0.364	0.414	0.513
70	0.140	0.182	0.223	0.274	0.310	0.396

Service Retirement

Public Agency Miscellaneous 2% @ 62

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.000	0.000	0.000	0.000	0.000	0.000
51	0.000	0.000	0.000	0.000	0.000	0.000
52	0.010	0.013	0.016	0.019	0.022	0.024
53	0.013	0.017	0.020	0.024	0.027	0.031
54	0.021	0.027	0.033	0.039	0.045	0.050
55	0.044	0.056	0.068	0.080	0.092	0.104
56	0.030	0.039	0.047	0.055	0.063	0.072
57	0.036	0.046	0.056	0.066	0.076	0.086
58	0.046	0.059	0.072	0.085	0.097	0.110
59	0.058	0.074	0.089	0.105	0.121	0.137
60	0.062	0.078	0.095	0.112	0.129	0.146
61	0.062	0.079	0.096	0.113	0.129	0.146
62	0.097	0.123	0.150	0.176	0.202	0.229
63	0.089	0.113	0.137	0.162	0.186	0.210
64	0.094	0.120	0.145	0.171	0.197	0.222
65	0.129	0.164	0.199	0.234	0.269	0.304
66	0.105	0.133	0.162	0.190	0.219	0.247
67	0.105	0.133	0.162	0.190	0.219	0.247
68	0.105	0.133	0.162	0.190	0.219	0.247
69	0.105	0.133	0.162	0.190	0.219	0.247
70	0.125	0.160	0.194	0.228	0.262	0.296

Service Retirement

Public Agency Fire ½ @ 55 and 2% @ 55

Age	Rate	Age	Rate
50	0.0159	56	0.1108
51	0.0000	57	0.0000
52	0.0344	58	0.0950
53	0.0199	59	0.0441
54	0.0413	60	1.00000
55	0.0751		

Public Agency Police ½ @ 55 and 2% @ 55

Age	Rate	Age	Rate
50	0.0255	56	0.0692
51	0.0000	57	0.0511
52	0.0164	58	0.0724
53	0.0272	59	0.0704
54	0.0095	60	1.0000
55	0.1667		

Service Retirement

Public Agency Police 2% @ 50						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.005	0.005	0.005	0.005	0.017	0.089
51	0.005	0.005	0.005	0.005	0.017	0.087
52	0.018	0.018	0.018	0.018	0.042	0.132
53	0.044	0.044	0.044	0.044	0.090	0.217
54	0.065	0.065	0.065	0.065	0.126	0.283
55	0.086	0.086	0.086	0.086	0.166	0.354
56	0.067	0.067	0.067	0.067	0.130	0.289
57	0.066	0.066	0.066	0.066	0.129	0.288
58	0.066	0.066	0.066	0.066	0.129	0.288
59	0.139	0.139	0.139	0.139	0.176	0.312
60	0.123	0.123	0.123	0.123	0.153	0.278
61	0.110	0.110	0.110	0.110	0.138	0.256
62	0.130	0.130	0.130	0.130	0.162	0.291
63	0.130	0.130	0.130	0.130	0.162	0.291
64	0.130	0.130	0.130	0.130	0.162	0.291
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

Public Agency Fire 2% @ 50						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.009	0.009	0.009	0.009	0.013	0.020
51	0.013	0.013	0.013	0.013	0.020	0.029
52	0.018	0.018	0.018	0.018	0.028	0.042
53	0.052	0.052	0.052	0.052	0.079	0.119
54	0.067	0.067	0.067	0.067	0.103	0.154
55	0.089	0.089	0.089	0.089	0.136	0.204
56	0.083	0.083	0.083	0.083	0.127	0.190
57	0.082	0.082	0.082	0.082	0.126	0.189
58	0.088	0.088	0.088	0.088	0.136	0.204
59	0.074	0.074	0.074	0.074	0.113	0.170
60	0.100	0.100	0.100	0.100	0.154	0.230
61	0.072	0.072	0.072	0.072	0.110	0.165
62	0.099	0.099	0.099	0.099	0.152	0.228
63	0.114	0.114	0.114	0.114	0.175	0.262
64	0.114	0.114	0.114	0.114	0.175	0.262
65	1.000	1.000	1.000	1.000	1.000	1.000

Service Retirement

Public Agency Police 3% @ 55						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.004	0.004	0.004	0.004	0.015	0.086
51	0.014	0.014	0.014	0.014	0.034	0.114
52	0.026	0.026	0.026	0.026	0.060	0.154
53	0.038	0.038	0.038	0.038	0.083	0.188
54	0.071	0.071	0.071	0.071	0.151	0.292
55	0.061	0.061	0.061	0.061	0.131	0.261
56	0.072	0.072	0.072	0.072	0.153	0.295
57	0.065	0.065	0.065	0.065	0.140	0.273
58	0.066	0.066	0.066	0.066	0.142	0.277
59	0.118	0.118	0.118	0.118	0.247	0.437
60	0.065	0.065	0.065	0.065	0.138	0.272
61	0.084	0.084	0.084	0.084	0.178	0.332
62	0.108	0.108	0.108	0.108	0.226	0.405
63	0.084	0.084	0.084	0.084	0.178	0.332
64	0.084	0.084	0.084	0.084	0.178	0.332
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

Public Agency Fire 3% @ 55						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.001	0.001	0.001	0.006	0.016	0.069
51	0.002	0.002	0.002	0.006	0.018	0.071
52	0.012	0.012	0.012	0.021	0.040	0.098
53	0.032	0.032	0.032	0.049	0.085	0.149
54	0.057	0.057	0.057	0.087	0.144	0.217
55	0.073	0.073	0.073	0.109	0.179	0.259
56	0.064	0.064	0.064	0.097	0.161	0.238
57	0.063	0.063	0.063	0.095	0.157	0.233
58	0.065	0.065	0.065	0.099	0.163	0.241
59	0.088	0.088	0.088	0.131	0.213	0.299
60	0.105	0.105	0.105	0.155	0.251	0.344
61	0.118	0.118	0.118	0.175	0.282	0.380
62	0.087	0.087	0.087	0.128	0.210	0.295
63	0.067	0.067	0.067	0.100	0.165	0.243
64	0.067	0.067	0.067	0.100	0.165	0.243
65	1.000	1.000	1.000	1.000	1.000	1.000

Service Retirement

Public Agency Police 3% @ 50						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.050	0.050	0.050	0.099	0.240	0.314
51	0.034	0.034	0.034	0.072	0.198	0.260
52	0.033	0.033	0.033	0.071	0.198	0.259
53	0.039	0.039	0.039	0.080	0.212	0.277
54	0.045	0.045	0.045	0.092	0.229	0.300
55	0.052	0.052	0.052	0.105	0.248	0.323
56	0.042	0.042	0.042	0.087	0.221	0.289
57	0.043	0.043	0.043	0.088	0.223	0.292
58	0.054	0.054	0.054	0.109	0.255	0.333
59	0.054	0.054	0.054	0.108	0.253	0.330
60	0.060	0.060	0.060	0.121	0.272	0.355
61	0.048	0.048	0.048	0.098	0.238	0.311
62	0.061	0.061	0.061	0.122	0.274	0.357
63	0.057	0.057	0.057	0.115	0.263	0.343
64	0.069	0.069	0.069	0.137	0.296	0.385
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

Public Agency Fire 3% @ 50						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.020	0.020	0.020	0.040	0.130	0.192
51	0.008	0.008	0.008	0.023	0.107	0.164
52	0.023	0.023	0.023	0.043	0.136	0.198
53	0.023	0.023	0.023	0.043	0.135	0.198
54	0.027	0.027	0.027	0.048	0.143	0.207
55	0.043	0.043	0.043	0.070	0.174	0.244
56	0.053	0.053	0.053	0.085	0.196	0.269
57	0.054	0.054	0.054	0.086	0.197	0.271
58	0.052	0.052	0.052	0.084	0.193	0.268
59	0.075	0.075	0.075	0.116	0.239	0.321
60	0.065	0.065	0.065	0.102	0.219	0.298
61	0.076	0.076	0.076	0.117	0.241	0.324
62	0.068	0.068	0.068	0.106	0.224	0.304
63	0.027	0.027	0.027	0.049	0.143	0.208
64	0.094	0.094	0.094	0.143	0.277	0.366
65	1.000	1.000	1.000	1.000	1.000	1.000

Service Retirement

Public Agency Police 2% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.011	0.011	0.011	0.011	0.020	0.036
51	0.009	0.009	0.009	0.009	0.016	0.028
52	0.018	0.018	0.018	0.018	0.034	0.060
53	0.037	0.037	0.037	0.037	0.067	0.119
54	0.049	0.049	0.049	0.049	0.089	0.159
55	0.063	0.063	0.063	0.063	0.115	0.205
56	0.045	0.045	0.045	0.045	0.082	0.146
57	0.064	0.064	0.064	0.064	0.117	0.209
58	0.047	0.047	0.047	0.047	0.086	0.154
59	0.105	0.105	0.105	0.105	0.130	0.191
60	0.105	0.105	0.105	0.105	0.129	0.188
61	0.105	0.105	0.105	0.105	0.129	0.188
62	0.105	0.105	0.105	0.105	0.129	0.188
63	0.105	0.105	0.105	0.105	0.129	0.188
64	0.105	0.105	0.105	0.105	0.129	0.188
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

Public Agency Fire 2% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.005	0.005	0.005	0.005	0.008	0.012
51	0.006	0.006	0.006	0.006	0.009	0.013
52	0.012	0.012	0.012	0.012	0.019	0.028
53	0.033	0.033	0.033	0.033	0.050	0.075
54	0.045	0.045	0.045	0.045	0.069	0.103
55	0.061	0.061	0.061	0.061	0.094	0.140
56	0.055	0.055	0.055	0.055	0.084	0.126
57	0.081	0.081	0.081	0.081	0.125	0.187
58	0.059	0.059	0.059	0.059	0.091	0.137
59	0.055	0.055	0.055	0.055	0.084	0.126
60	0.085	0.085	0.085	0.085	0.131	0.196
61	0.085	0.085	0.085	0.085	0.131	0.196
62	0.085	0.085	0.085	0.085	0.131	0.196
63	0.085	0.085	0.085	0.085	0.131	0.196
64	0.085	0.085	0.085	0.085	0.131	0.196
65	1.000	1.000	1.000	1.000	1.000	1.000

Service Retirement

Public Agency Police 2.5% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.014	0.014	0.014	0.014	0.025	0.045
51	0.012	0.012	0.012	0.012	0.021	0.038
52	0.025	0.025	0.025	0.025	0.046	0.081
53	0.047	0.047	0.047	0.047	0.086	0.154
54	0.063	0.063	0.063	0.063	0.115	0.205
55	0.076	0.076	0.076	0.076	0.140	0.249
56	0.054	0.054	0.054	0.054	0.099	0.177
57	0.071	0.071	0.071	0.071	0.130	0.232
58	0.057	0.057	0.057	0.057	0.103	0.184
59	0.126	0.126	0.126	0.126	0.156	0.229
60	0.126	0.126	0.126	0.126	0.155	0.226
61	0.126	0.126	0.126	0.126	0.155	0.226
62	0.126	0.126	0.126	0.126	0.155	0.226
63	0.126	0.126	0.126	0.126	0.155	0.226
64	0.126	0.126	0.126	0.126	0.155	0.226
65	1.000	1.000	1.000	1.000	1.000	1.000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

Public Agency Fire 2.5% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.007	0.007	0.007	0.007	0.010	0.015
51	0.008	0.008	0.008	0.008	0.012	0.018
52	0.016	0.016	0.016	0.016	0.025	0.038
53	0.042	0.042	0.042	0.042	0.064	0.096
54	0.057	0.057	0.057	0.057	0.088	0.132
55	0.074	0.074	0.074	0.074	0.114	0.170
56	0.066	0.066	0.066	0.066	0.102	0.153
57	0.090	0.090	0.090	0.090	0.139	0.208
58	0.071	0.071	0.071	0.071	0.110	0.164
59	0.066	0.066	0.066	0.066	0.101	0.151
60	0.102	0.102	0.102	0.102	0.157	0.235
61	0.102	0.102	0.102	0.102	0.157	0.236
62	0.102	0.102	0.102	0.102	0.157	0.236
63	0.102	0.102	0.102	0.102	0.157	0.236
64	0.102	0.102	0.102	0.102	0.157	0.236
65	1.000	1.000	1.000	1.000	1.000	1.000

Service Retirement

Public Agency Police 2.7% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.0138	0.0138	0.0138	0.0138	0.0253	0.0451
51	0.0123	0.0123	0.0123	0.0123	0.0226	0.0402
52	0.0249	0.0249	0.0249	0.0249	0.0456	0.0812
53	0.0497	0.0497	0.0497	0.0497	0.0909	0.1621
54	0.0662	0.0662	0.0662	0.0662	0.1211	0.2160
55	0.0854	0.0854	0.0854	0.0854	0.1563	0.2785
56	0.0606	0.0606	0.0606	0.0606	0.1108	0.1975
57	0.0711	0.0711	0.0711	0.0711	0.1300	0.2318
58	0.0628	0.0628	0.0628	0.0628	0.1149	0.2049
59	0.1396	0.1396	0.1396	0.1396	0.1735	0.2544
60	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
61	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
62	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
63	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
64	0.1396	0.1396	0.1396	0.1396	0.1719	0.2506
65	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

- These rates also apply to Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

Public Agency Fire 2.7% @ 57						
Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.0065	0.0065	0.0065	0.0065	0.0101	0.0151
51	0.0081	0.0081	0.0081	0.0081	0.0125	0.0187
52	0.0164	0.0164	0.0164	0.0164	0.0254	0.0380
53	0.0442	0.0442	0.0442	0.0442	0.0680	0.1018
54	0.0606	0.0606	0.0606	0.0606	0.0934	0.1397
55	0.0825	0.0825	0.0825	0.0825	0.1269	0.1900
56	0.0740	0.0740	0.0740	0.0740	0.1140	0.1706
57	0.0901	0.0901	0.0901	0.0901	0.1387	0.2077
58	0.0790	0.0790	0.0790	0.0790	0.1217	0.1821
59	0.0729	0.0729	0.0729	0.0729	0.1123	0.1681
60	0.1135	0.1135	0.1135	0.1135	0.1747	0.2615
61	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
62	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
63	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
64	0.1136	0.1136	0.1136	0.1136	0.1749	0.2618
65	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Service Retirement

Schools 2% @ 55

Age	Duration of Service					
	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.005	0.009	0.013	0.015	0.016	0.018
51	0.005	0.010	0.014	0.017	0.019	0.021
52	0.006	0.012	0.017	0.020	0.022	0.025
53	0.007	0.014	0.019	0.023	0.026	0.029
54	0.012	0.024	0.033	0.039	0.044	0.049
55	0.024	0.048	0.067	0.079	0.088	0.099
56	0.020	0.039	0.055	0.065	0.072	0.081
57	0.021	0.042	0.059	0.070	0.078	0.087
58	0.025	0.050	0.070	0.083	0.092	0.103
59	0.029	0.057	0.080	0.095	0.105	0.118
60	0.037	0.073	0.102	0.121	0.134	0.150
61	0.046	0.090	0.126	0.149	0.166	0.186
62	0.076	0.151	0.212	0.250	0.278	0.311
63	0.069	0.136	0.191	0.225	0.251	0.281
64	0.067	0.133	0.185	0.219	0.244	0.273
65	0.091	0.180	0.251	0.297	0.331	0.370
66	0.072	0.143	0.200	0.237	0.264	0.295
67	0.067	0.132	0.185	0.218	0.243	0.272
68	0.060	0.118	0.165	0.195	0.217	0.243
69	0.067	0.133	0.187	0.220	0.246	0.275
70	0.066	0.131	0.183	0.216	0.241	0.270

Miscellaneous

Internal Revenue Code Section 415

The limitations on benefits imposed by Internal Revenue Code Section 415 are taken into account in this valuation. Each year, the impact of any changes in this limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base. This results in lower contributions for those employers contributing to the Replacement Benefit Fund and protects CalPERS from prefunding expected benefits in excess of limits imposed by federal tax law.

Internal Revenue Code Section 401(a)(17)

The limitations on compensation imposed by Internal Revenue Code Section 401(a)(17) are taken into account in this valuation. Each year, the impact of any changes in the compensation limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base. The compensation limit for classic members for the 2016 calendar year is \$265,000.

APPENDIX B
PRINCIPAL PLAN PROVISIONS

The following is a description of the principal plan provisions used in calculating costs and liabilities. We have indicated whether a plan provision is standard or optional. Standard benefits are applicable to all members while optional benefits vary among employers. Optional benefits that apply to a single period of time, such as Golden Handshakes, have not been included. Many of the statements in this summary are general in nature, and are intended to provide an easily understood summary of the Public Employees' Retirement Law. The law itself governs in all situations.

Service Retirement

Eligibility

A classic CalPERS member or PEPRA Safety member becomes eligible for Service Retirement upon attainment of age 50 with at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements). For employees hired into a plan with the 1.5% at 65 formula, eligibility for service retirement is age 55 with at least 5 years of service. PEPRA miscellaneous members become eligible for Service Retirement upon attainment of age 52 with at least 5 years of service.

Benefit

The Service Retirement benefit is a monthly allowance equal to the product of the *benefit factor*, *years of service*, and *final compensation*.

- The *benefit factor* depends on the benefit formula specified in your agency's contract. The table below shows the factors for each of the available formulas. Factors vary by the member's age at retirement. Listed are the factors for retirement at whole year ages:

Miscellaneous Plan Formulas

Retirement Age	1.5% at 65	2% at 60	2% at 55	2.5% at 55	2.7% at 55	3% at 60	PEPRA 2% at 62
50	0.5000%	1.092%	1.426%	2.000%	2.000%	2.000%	N/A
51	0.5667%	1.156%	1.522%	2.100%	2.140%	2.100%	N/A
52	0.6334%	1.224%	1.628%	2.200%	2.280%	2.200%	1.000%
53	0.7000%	1.296%	1.742%	2.300%	2.420%	2.300%	1.100%
54	0.7667%	1.376%	1.866%	2.400%	2.560%	2.400%	1.200%
55	0.8334%	1.460%	2.000%	2.500%	2.700%	2.500%	1.300%
56	0.9000%	1.552%	2.052%	2.500%	2.700%	2.600%	1.400%
57	0.9667%	1.650%	2.104%	2.500%	2.700%	2.700%	1.500%
58	1.0334%	1.758%	2.156%	2.500%	2.700%	2.800%	1.600%
59	1.1000%	1.874%	2.210%	2.500%	2.700%	2.900%	1.700%
60	1.1667%	2.000%	2.262%	2.500%	2.700%	3.000%	1.800%
61	1.2334%	2.134%	2.314%	2.500%	2.700%	3.000%	1.900%
62	1.3000%	2.272%	2.366%	2.500%	2.700%	3.000%	2.000%
63	1.3667%	2.418%	2.418%	2.500%	2.700%	3.000%	2.100%
64	1.4334%	2.418%	2.418%	2.500%	2.700%	3.000%	2.200%
65	1.5000%	2.418%	2.418%	2.500%	2.700%	3.000%	2.300%
66	1.5000%	2.418%	2.418%	2.500%	2.700%	3.000%	2.400%
67 & up	1.5000%	2.418%	2.418%	2.500%	2.700%	3.000%	2.500%

Safety Plan Formulas

Retirement Age	½ at 55 *	2% at 55	2% at 50	3% at 55	3% at 50
50	1.783%	1.426%	2.000%	2.400%	3.000%
51	1.903%	1.522%	2.140%	2.520%	3.000%
52	2.035%	1.628%	2.280%	2.640%	3.000%
53	2.178%	1.742%	2.420%	2.760%	3.000%
54	2.333%	1.866%	2.560%	2.880%	3.000%
55 & Up	2.500%	2.000%	2.700%	3.000%	3.000%

* For this formula, the benefit factor varies by entry age. The factors shown are for members with an entry age of 35 or greater. If entry age is less than 35, then the age 55 benefit factor is 50 percent divided by the difference between age 55 and entry age. The benefit factor for ages prior to age 55 is the same proportion of the age 55 benefit factor as in the above table.

PEPRA Safety Plan Formulas

Retirement Age	2% at 57	2.5% at 57	2.7% at 57
50	1.426%	2.000%	2.000%
51	1.508%	2.071%	2.100%
52	1.590%	2.143%	2.200%
53	1.672%	2.214%	2.300%
54	1.754%	2.286%	2.400%
55	1.836%	2.357%	2.500%
56	1.918%	2.429%	2.600%
57 & Up	2.000%	2.500%	2.700%

- The *years of service* is the amount credited by CalPERS to a member while he or she is employed in this group (or for other periods that are recognized under the employer's contract with CalPERS). For a member who has earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance. An agency may contract for an optional benefit where any unused sick leave accumulated at the time of retirement will be converted to credited service at a rate of 0.004 years of service for each day of sick leave.
- The *final compensation* is the monthly average of the member's highest 36 or 12 consecutive months' full-time equivalent monthly pay (no matter which CalPERS employer paid this compensation). The standard benefit is 36 months. Employers had the option of providing a final compensation equal to the highest 12 consecutive months for classic plans only. Final compensation must be defined by the highest 36 consecutive months' pay under the 1.5% at 65 formula. PEPRA members have a cap on the annual salary that can be used to calculate final compensation for all new members based on the Social Security Contribution and Benefit Base. For employees that participate in Social Security, this cap is \$118,775 for 2016 and for those employees that do not participate in social security, the cap for 2016 is \$142,530. Adjustments to the caps are permitted annually based on changes to the CPI for All Urban Consumers.
- Employees must be covered by Social Security with the 1.5% at 65 formula. Social Security is optional for all other benefit formulas. For employees covered by Social Security, the Modified formula is the standard benefit. Under this type of formula, the final compensation is offset by \$133.33 (or by one third if the final compensation is less than \$400). Employers may contract for the Full benefit with Social Security that will eliminate the offset applicable to the final compensation.

For employees not covered by Social Security, the Full benefit is paid with no offsets. Auxiliary organizations of the CSUC system may elect reduced contribution rates, in which case the offset is \$317 if members are not covered by Social Security or \$513 if members are covered by Social Security.

- The Miscellaneous Service Retirement benefit is not capped. The Safety Service Retirement benefit is capped at 90 percent of final compensation.

Vested Deferred Retirement

Eligibility for Deferred Status

A CalPERS member becomes eligible for a deferred vested retirement benefit when he or she leaves employment, keeps his or her contribution account balance on deposit with CalPERS, **and** has earned at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements).

Eligibility to Start Receiving Benefits

The CalPERS classic members and Safety PEPRA members become eligible to receive the deferred retirement benefit upon satisfying the eligibility requirements for Deferred Status and upon attainment of age 50 (55 for employees hired into a 1.5% @ 65 plan). PEPRA Miscellaneous members become eligible to receive the deferred retirement benefit upon satisfying the eligibility requirements for Deferred Status and upon attainment of age 52.

Benefit

The vested deferred retirement benefit is the same as the Service Retirement benefit, where the benefit factor is based on the member's age at allowance commencement. For members who have earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance.

Non-Industrial (Non-Job Related) Disability Retirement

Eligibility

A CalPERS member is eligible for Non-Industrial Disability Retirement if he or she becomes *disabled* and has at least 5 years of credited service (total service across all CalPERS employers, and with certain other Retirement Systems with which CalPERS has reciprocity agreements). There is no special age requirement. *Disabled* means the member is unable to perform his or her job because of an illness or injury, which is expected to be permanent or to last indefinitely. The illness or injury does not have to be job related. A CalPERS member must be actively employed by any CalPERS employer at the time of disability in order to be eligible for this benefit.

Standard Benefit

The standard Non-Industrial Disability Retirement benefit is a monthly allowance equal to 1.8 percent of final compensation, multiplied by *service*, which is determined as follows:

- *Service* is CalPERS credited service, for members with less than 10 years of service or greater than 18.518 years of service; or
- *Service* is CalPERS credited service plus the additional number of years that the member would have worked until age 60, for members with at least 10 years but not more than 18.518 years of service. The maximum benefit in this case is 33 1/3 percent of Final Compensation.

Improved Benefit

Employers have the option of providing the improved Non-Industrial Disability Retirement benefit. This benefit provides a monthly allowance equal to 30 percent of final compensation for the first 5 years of service, plus 1 percent for each additional year of service to a maximum of 50 percent of final compensation.

Members who are eligible for a larger service retirement benefit may choose to receive that benefit in lieu of a disability benefit. Members eligible to retire, and who have attained the normal retirement age determined by their service retirement benefit formula, will receive the same dollar amount for disability retirement as that payable for service retirement. For members who have earned service with multiple CalPERS employers, the benefit attributed to each employer is the total disability allowance multiplied by the ratio of service with a particular employer to the total CalPERS service.

Industrial (Job Related) Disability Retirement

All safety members have this benefit. For miscellaneous members, employers have the option of providing this benefit. An employer may choose to provide the increased benefit option or the improved benefit option.

Eligibility

An employee is eligible for Industrial Disability Retirement if he or she becomes disabled while working, where disabled means the member is unable to perform the duties of the job because of a work-related illness or injury which is expected to be permanent or to last indefinitely. A CalPERS member who has left active employment within this group is not eligible for this benefit, except to the extent described below.

Standard Benefit

The standard Industrial Disability Retirement benefit is a monthly allowance equal to 50 percent of final compensation.

Increased Benefit (75 percent of Final Compensation)

The increased Industrial Disability Retirement benefit is a monthly allowance equal to 75 percent final compensation for total disability.

Improved Benefit (50 percent to 90 percent of Final Compensation)

The improved Industrial Disability Retirement benefit is a monthly allowance equal to the Workman's Compensation Appeals Board permanent disability rate percentage (if 50 percent or greater, with a maximum of 90 percent) times the final compensation.

For a CalPERS member not actively employed in this group who became disabled while employed by some other CalPERS employer, the benefit is a return of accumulated member contributions with respect to employment in this group. With the standard or increased benefit, a member may also choose to receive the annuitization of the accumulated member contributions.

If a member is eligible for Service Retirement, and if the Service Retirement benefit is more than the Industrial Disability Retirement benefit, the member may choose to receive the larger benefit.

Post-Retirement Death Benefit

Standard Lump Sum Payment

Upon the death of a retiree, a one-time lump sum payment of \$500 will be made to the retiree's designated survivor(s), or to the retiree's estate.

Improved Lump Sum Payment

Employers have the option of providing an improved lump sum death benefit of \$600, \$2,000, \$3,000, \$4,000, or \$5,000.

Form of Payment for Retirement Allowance

Standard Form of Payment

The retirement allowance is paid to the retiree in the form of an annuity for as long as he or she is alive. The retiree may choose to provide for a portion of his or her allowance to be paid to any designated beneficiary after his or her death. CalPERS provides for a variety of such benefit options, which the retiree pays for by taking a reduction in his or her retirement allowance. Such a reduction takes into account the amount to be provided to the beneficiary and the probable duration of payments (based on the ages of the member and beneficiary) upon the member's death.

Improved Form of Payment (Post Retirement Survivor Allowance)

Employers have the option to contract for the post retirement survivor allowance.

For retirement allowances with respect to service subject to the modified formula, 25 percent of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. For retirement allowances with respect to service subject to the full or supplemental formula, 50 percent of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. This additional benefit is referred to as post retirement survivor allowance (PRSA) or simply as survivor continuance.

In other words, 25 percent or 50 percent of the allowance, the continuance portion, is paid to the retiree for as long as he or she is alive, and that same amount is continued to the retiree's spouse (or if no eligible spouse, to unmarried children until they attain age 18; or, if no eligible children, to a qualifying dependent parent) for the rest of his or her lifetime. This benefit will not be discontinued in the event the spouse remarries.

The remaining 75 percent or 50 percent of the retirement allowance, which may be referred to as the option portion of the benefit, is paid to the retiree as an annuity for as long as he or she is alive. Or, the retiree may choose to provide for some of this option portion to be paid to any designated beneficiary after the retiree's death. Benefit options applicable to the option portion are the same as those offered with the standard form. The reduction is calculated in the same manner but is applied only to the option portion.

Pre-Retirement Death Benefits

Basic Death Benefit

This is a standard benefit.

Eligibility

An employee's beneficiary (or estate) may receive the Basic Death benefit if the member dies while actively employed. A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that benefit in lieu of the Basic Death benefit.

Benefit

The Basic Death benefit is a lump sum in the amount of the member's accumulated contributions, where interest is currently credited at 7.5 percent per year, plus a lump sum in the amount of one month's salary for each completed year of service, up to a maximum of six months' salary. For purposes of this benefit, one month's salary is defined as the member's average monthly full-time rate of compensation during the 12 months preceding death.

1957 Survivor Benefit

This is a standard benefit.

Eligibility

An employee's *eligible survivor(s)* may receive the 1957 Survivor benefit if the member dies while actively employed, has attained at least age 50 for Classic and Safety PEPPRA members or age 52 for Miscellaneous PEPPRA members, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other Retirement Systems with which CalPERS has reciprocity agreements). A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. An eligible survivor means the surviving spouse to whom the member was married at least one year before death or, if there is no eligible spouse, to the member's unmarried children under age 18. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that benefit in lieu of the 1957 Survivor benefit.

Benefit

The 1957 Survivor benefit is a monthly allowance equal to one-half of the unmodified Service Retirement benefit that the member would have been entitled to receive if the member had retired on the date of his or her death. If the benefit is payable to the spouse, the benefit is discontinued upon the death of the spouse. If the benefit is payable to a dependent child, the benefit will be discontinued upon death or attainment of age 18, unless the child is disabled. The total amount paid will be at least equal to the Basic Death benefit.

Optional Settlement 2W Death Benefit

This is an optional benefit.

Eligibility

An employee's *eligible survivor* may receive the Optional Settlement 2W Death benefit if the member dies while actively employed, has attained at least age 50 for Classic and Safety PEPPRA members or age 52 for Miscellaneous PEPPRA members, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other Retirement Systems with which CalPERS has reciprocity agreements). A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married at least one year before death. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that benefit in lieu of the Optional Settlement 2W Death benefit.

Benefit

The Optional Settlement 2W Death benefit is a monthly allowance equal to the Service Retirement benefit that the member would have received had the member retired on the date of his or her death and elected Optional Settlement 2W. (A retiree who elects Optional Settlement 2W receives an allowance that has been reduced so that it will continue to be paid after his or her death to a surviving beneficiary.) The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried children under age 18, if applicable. The total amount paid will be at least equal to the Basic Death Benefit.

Special Death Benefit

This is a standard benefit for safety members. An employer may elect to provide this benefit for miscellaneous members.

Eligibility

An employee's *eligible survivor(s)* may receive the Special Death benefit if the member dies while actively employed and the death is job-related. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried children under age 22. An eligible survivor who chooses to receive this benefit will not receive any other death benefit.

Benefit

The Special Death benefit is a monthly allowance equal to 50 percent of final compensation, and will be increased whenever the compensation paid to active employees is increased but ceases to increase when the member would have attained age 50. The allowance is payable to the surviving spouse until death at which time the allowance is continued to any unmarried children under age 22. There is a guarantee that the total amount paid will at least equal the Basic Death Benefit.

If the member's death is the result of an accident or injury caused by external violence or physical force incurred in the performance of the member's duty, and there are *eligible* surviving children (*eligible* means unmarried children under age 22) in addition to an eligible spouse, then an **additional monthly allowance** is paid equal to the following:

1.	if 1 eligible child:	12.5 percent of final compensation
2.	if 2 eligible children:	20.0 percent of final compensation
3.	if 3 or more eligible children:	25.0 percent of final compensation

Alternate Death Benefit for Local Fire Members

This is an optional benefit available only to local fire members.

Eligibility

An employee's *eligible survivor(s)* may receive the Alternate Death benefit in lieu of the Basic Death Benefit or the 1957 Survivor Benefit if the member dies while actively employed and has at least 20 years of total CalPERS service. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried children under age 18.

Benefit

The Alternate Death benefit is a monthly allowance equal to the Service Retirement benefit that the member would have received had the member retired on the date of his or her death and elected Optional Settlement 2W. (A retiree who elects Optional Settlement 2W receives an allowance that has been reduced so that it will continue to be paid after his or her death to a surviving beneficiary.) If the member has not yet attained age 50, the benefit is equal to that which would be payable had the member retired at age 50, based on service credited at the time of death. The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried children under age 18, if applicable. The total amount paid will be at least equal to the Basic Death Benefit.

Cost-of-Living Adjustments (COLA)

Standard Benefit

Retirement and survivor allowances are adjusted each year in May for cost of living, beginning the second calendar year after the year of retirement. The standard cost-of-living adjustment (COLA) is 2 percent. Annual adjustments are calculated by first determining the lesser of 1) 2 percent compounded from the end of the year of retirement or 2) actual rate of inflation. The resulting increase is divided by the total increase provided in prior years. For any particular year, the COLA adjustment may be less than 2 percent (when the rate of inflation is low), may be greater than the rate of inflation (when the rate of inflation is low after several years of high inflation) or may even be greater than 2 percent (when inflation is high after several years of low inflation).

Improved Benefit

Employers have the option of providing a COLA of 3 percent, 4 percent, or 5 percent, determined in the same manner as described above for the standard 2 percent COLA. An improved COLA is not available with the 1.5% at 65 formula.

Purchasing Power Protection Allowance (PPPA)

Retirement and survivor allowances are protected against inflation by PPPA. PPPA benefits are cost-of-living adjustments that are intended to maintain an individual's allowance at 80 percent of the initial allowance at retirement adjusted for inflation since retirement. The PPPA benefit will be coordinated with other cost-of-living adjustments provided under the plan.

Employee Contributions

Each employee contributes toward his or her retirement based upon the retirement formula. The standard employee contribution is described below:

- The percent contributed below the monthly compensation breakpoint is 0 percent.
- The monthly compensation breakpoint is \$0 for full and supplemental formula members and \$133.33 for employees covered by the modified formula.
- The percent contributed above the monthly compensation breakpoint depends upon the benefit formula, as shown in the table below.

<u>Benefit Formula</u>	<u>Percent Contributed above the Breakpoint</u>
Miscellaneous, 1.5% at 65	2%
Miscellaneous, 2% at 60	7%
Miscellaneous, 2% at 55	7%
Miscellaneous, 2.5% at 55	8%
Miscellaneous, 2.7% at 55	8%
Miscellaneous, 3% at 60	8%
Miscellaneous, 2% at 62	50% of the Total Normal Cost
Safety, 1/2 at 55	Varies by entry age
Safety, 2% at 55	7%
Safety, 2% at 50	9%
Safety, 3% at 55	9%
Safety, 3% at 50	9%
Safety, 2% at 57	50% of the Total Normal Cost
Safety, 2.5% at 57	50% of the Total Normal Cost
Safety, 2.7% at 57	50% of the Total Normal Cost

The employer may choose to "pick-up" these contributions for the employees (Employer Paid Member Contributions or EPMC). EPMC is prohibited for new PEPRAs members.

An employer may also include Employee Cost Sharing in the contract, where employees agree to share the cost of the employer contribution with or without a change in benefit. These contributions are paid in addition to the member contribution.

Auxiliary organizations of the CSUC system may elect reduced contribution rates, in which case the offset is \$317 and the contribution rate is 6 percent if members are not covered by Social Security. If members are covered by Social Security, the offset is \$513 and the contribution rate is 5 percent.

Refund of Employee Contributions

If the member's service with the employer ends, and if the member does not satisfy the eligibility conditions for any of the retirement benefits above, the member may elect to receive a refund of his or her employee contributions, which are credited annually with 6 percent interest.

1959 Survivor Benefit

This is a pre-retirement death benefit available only to members not covered by Social Security. Any agency joining CalPERS subsequent to 1993 is required to provide this benefit for members not covered by Social Security. The benefit was optional for agencies joining CalPERS prior to 1994. Levels 1, 2, and 3 are now closed. Only the 4th or Indexed levels remain open for new agencies, or existing agencies wishing to increase the current level.

This benefit is not included in the results presented in this valuation. More information on this benefit is available on the CalPERS website at www.calpers.ca.gov.

APPENDIX C

CLASSIFICATION OF OPTIONAL BENEFITS

Classification of Optional Benefits

Below is the list of the available optional benefit provisions and their initial classification upon establishment of risk pools. When new benefits become available as a result of legislation, the Chief Actuary will determine their classification in accordance with the criteria established in the Board policy.

Class 0

Class 0 benefit surcharge is the increase in normal cost for a given benefit formula above the baseline PEPRA 2% at 62 benefit formula.

Class 1

Class 1 benefits have been identified as additional benefits which have a significant, ongoing effect on the total plan cost. In some cases, a Class 1 benefit may be an alternate benefit formula. These benefits vary by employer across the risk pool. Agencies contracting for a Class 1 benefit will be responsible for the past service liability associated with such benefit and will be required to pay a surcharge established by the actuary to cover the ongoing cost (normal cost) of the Class 1 benefit.

The table below shows the list of Class 0 and Class 1 benefits and their applicable surcharge for each benefit formula in the Miscellaneous Risk Pool.

Optional Benefit	2% at 62	1.5% at 65	2% at 60	2% at 55	2.5% at 55	2.7% at 55	3% at 60
Class 0 Benefit	0.000%	(0.515%)	0.792%	2.050%	3.180%	4.727%	5.917%
One Year Final Compensation	N/A	0.278%	0.465%	0.517%	0.587%	0.643%	0.680%
EPMC by contract, 7%	N/A	N/A	0.875%	0.951%	1.077%	1.174%	1.238%
EPMC by contract, 8%	N/A	N/A	0.000%	0.000%	1.231%	1.341%	1.414%
25% PRSA	0.674%	0.442%	0.712%	0.743%	0.810%	0.872%	0.930%
50% PRSA	0.674%	0.442%	0.712%	0.743%	0.810%	0.872%	0.930%
3% Annual COLA	0.791%	0.518%	0.881%	1.002%	1.169%	1.291%	1.354%
4% Annual COLA	0.791%	0.518%	0.881%	1.002%	1.169%	1.291%	1.354%
5% Annual COLA	0.791%	0.518%	0.881%	1.002%	1.169%	1.291%	1.354%
IDR For Local Miscellaneous Members	0.347%	0.369%	0.345%	0.349%	0.344%	0.344%	0.345%
Increased IDR Allowance to 75% of Compensation	0.604%	0.629%	0.601%	0.605%	0.597%	0.596%	0.597%
Employee Cost Sharing*	varies	varies	varies	varies	varies	varies	varies
Employee Contribution Rate for CSUC Auxiliary Organizations Reduced to State Member Level - Covered by Social Security	N/A	N/A	2.000%	2.000%	2.000%	2.000%	2.000%
Employee Contribution Rate for CSUC Auxiliary Organizations Reduced to State Member Level - Not Covered by Social Security	N/A	N/A	1.000%	1.000%	1.000%	1.000%	1.000%

For employers contracting for more than one Class 1 benefit, the surcharges listed in this table will be added together

*** Employee cost sharing had been eliminated as a surcharge from some of the June 30, 2010 valuations and from all of the June 30, 2011 and later valuations. It is now shown on my|CalPERS as a rate adjustment.**

Class 2

Class 2 benefits have been identified to be the ancillary benefits providing one-time increases in benefits. These benefits vary by employer across the risk pool. Agencies contracting for a Class 2 benefit will be responsible for the past service liability associated with such benefit.

The following benefits shall be classified as Class 2:

- One-time 1% to 6% Ad Hoc COLA Increases for members who retired or died prior to January 1, 1998 (Section 21328)
- "Golden Handshakes" – Section 20903 Two Years Additional Service Credit
- Credit for Prior Service Paid for by the Employer
- Military Service Credit (Section 20996)
- Credit for Local Retirement System Service for Employees of Agencies Contracted on a Prospective basis (Section 20530.1)
- Prior Service Credit for Employees of an Assumed Agency Function (Section 20936)
- Limit Prior Service to Members Employed on Contract Date (Section 20938)
- Public Service Credit for Limited Prior Service (Section 21031)
- Public Service Credit for Employees of an Assumed Agency or Function (Section 21025)

Class 3

Class 3 benefits have been identified to be additional benefits which have a minimal effect on the total plan cost. Class 3 benefits may vary by rate plan within each risk pool. However, the employer contribution rate will not vary within the risk pool due to the Class 3 benefits.

The following benefits shall be classified as Class 3:

- Full formula plus social security
- Post Retirement Lump Sum Death Benefit
- \$600 lump sum retired death benefit (Section 21622)
- \$2,000 lump sum retired death benefit (Section 21623.5)
- \$3,000 lump sum retired death benefit (Section 21623.5)
- \$4,000 lump sum retired death benefit (Section 21623.5)
- \$5,000 lump sum retired death benefit (Section 21623.5)
- Improved non-industrial disability allowance (Section 21427)
- Special death benefit for local safety members (Section 21540.5)
- Service Credit Purchased by Member
- Partial Service Retirement (Section 21118)
- Optional Membership for Part Time Employees (Section 20325)
- Extension of Reciprocity Rights for Elective Officers (Section 20356)
- Removal of Contract Exclusions Prospectively Only (Section 20503)
- Alternate Death Benefit for Local Fire Members credited with 20 or more years of service (Section 21547.7)

APPENDIX D

PARTICIPANT DATA

- **SOURCE OF THE PARTICIPANT DATA**
- **DATA VALIDATION TESTS AND ADJUSTMENTS**
- **SUMMARY OF VALUATION DATA**
- **ACTIVE MEMBERS**
- **TRANSFERRED AND TERMINATED MEMBERS**
- **RETIRED MEMBERS AND BENEFICIARIES**
- **DISTRIBUTION OF PLAN COSTS BY BENEFIT FORMULA**

Source of the Participant Data

The data was extracted from various databases within CalPERS and placed in the valuation system database by a series of extract programs. Included in this data are:

- Individual member and beneficiary information,
- Employment and payroll information,
- Accumulated contributions with interest,
- Service information,
- Benefit payment information,
- Information about the various organizations which contract with CalPERS, and
- Detailed information about the plan provisions applicable to each group of members.

Data Validation Tests and Adjustments

Once the information is extracted from the various computer systems into the database, update queries are then run against this data to correct for flaws found in the data. This part of the process is intended to validate the participant data for all CalPERS plans. The data is then checked for reasonableness and consistency with data from the prior valuation.

Checks on the data include:

- A reconciliation of the membership of the plans,
- Comparisons of various member statistics (average attained age, average entry age, average salary, etc.) for each plan with those from the prior year valuation,
- Comparisons of pension amounts for each retiree and beneficiary receiving payments with those from the prior year valuation,
- Checks for invalid ages and dates, and
- Reasonableness checks on various key data elements such as years of service and salary

As a result of the tests on the data, a number of adjustments were determined to be necessary. These included:

Dates of hire and dates of entry were adjusted where necessary to be consistent with the service fields, the date of birth and each other.

Summary of Valuation Data

	June 30, 2015	June 30, 2016
1. Number of Plans in the Risk Pool	2,252	2,323
2. Active Members		
a) Counts	30,471	31,376
b) Average Attained Age	45.75	45.48
c) Average Entry Age on Rate Plan	36.36	36.33
d) Average Years of Service	9.39	9.15
e) Average Annual Covered Pay	\$ 67,464	\$ 68,640
f) Annual Covered Payroll	\$ 2,055,683,261	\$ 2,153,642,973
g) Projected Annual Payroll for Contribution Year	\$ 2,246,300,603	\$ 2,353,343,825
h) Present Value of Future Payroll	\$ 16,225,750,620	\$ 17,244,490,767
3. Transferred Members	13,976	14,501
4. Terminated Members	18,439	19,099
5. Retired Members and Beneficiaries		
a) Counts*	29,607	31,083
b) Average Annual Benefits*	\$ 19,462	\$ 19,927
6. Active to Retired Ratio [(2a) / (5a)]	1.03	1.01

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

* Values may not match those on pages D-5 and D-6 due to inclusion of community property settlements.

Active Members

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

Distribution of Active Members by Age and Service

Attained Age	Years of Service at Valuation Date						Total
	0-4	5-9	10-14	15-19	20-24	25+	
15-24	916	4	0	0	0	0	920
25-29	2,249	302	22	0	0	0	2,573
30-34	2,277	986	362	15	0	0	3,640
35-39	1,878	1,065	769	249	9	0	3,970
40-44	1,437	924	841	471	124	11	3,808
45-49	1,362	917	856	531	308	177	4,151
50-54	1,272	913	929	649	423	507	4,693
55-59	924	791	833	602	361	554	4,065
60-64	534	475	533	370	218	353	2,483
65 and over	250	258	232	154	72	107	1,073
All Ages	13,099	6,635	5,377	3,041	1,515	1,709	31,376

Distribution of Average Annual Salaries by Age and Service

Attained Age	Years of Service at Valuation Date						Average
	0-4	5-9	10-14	15-19	20-24	25+	
15-24	\$34,721	\$47,170	\$0	\$0	\$0	\$0	\$34,776
25-29	44,705	50,369	58,132	0	0	0	45,485
30-34	54,058	61,183	63,158	67,510	0	0	56,948
35-39	60,448	66,217	70,379	72,666	78,842	0	64,727
40-44	64,709	72,240	72,866	75,955	80,243	77,463	70,272
45-49	70,363	76,605	75,442	80,668	91,252	83,727	76,227
50-54	75,571	78,181	78,685	83,701	87,152	85,882	79,977
55-59	73,311	76,409	78,780	81,941	81,882	87,032	78,944
60-64	70,042	71,983	74,009	79,826	84,161	82,365	75,714
65 and over	56,989	63,244	66,342	77,149	79,661	79,754	67,200
Average	\$59,035	\$70,169	\$73,960	\$79,837	\$85,328	\$84,867	\$68,640

Transferred and Terminated Members

Distribution of Participants Transferred to Other CalPERS Plans by Age and Service

Attained Age	Years of Service at Valuation Date						Total	Average Salary
	0-4	5-9	10-14	15-19	20-25	25+		
15-24	86	0	0	0	0	0	86	\$48,846
25-29	506	27	0	0	0	0	533	55,547
30-34	1,048	175	17	1	0	0	1,241	68,104
35-39	1,387	315	74	8	0	0	1,784	76,586
40-44	1,391	355	114	27	6	0	1,893	86,485
45-49	1,681	513	179	55	11	5	2,444	93,381
50-54	1,809	613	217	85	34	7	2,765	97,058
55-59	1,395	473	180	80	23	10	2,161	92,708
60-64	759	252	96	34	10	8	1,159	90,331
65 and over	296	81	40	11	4	3	435	95,194
All Ages	10,358	2,804	917	301	88	33	14,501	\$87,008

Distribution of Terminated Participants with Funds on Deposit by Age and Service

Attained Age	Years of Service at Valuation Date						Total	Average Salary
	0-4	5-9	10-14	15-19	20-25	25+		
15-24	221	0	0	0	0	0	221	\$28,916
25-29	1,132	37	1	0	0	0	1,170	33,705
30-34	2,037	220	31	1	0	0	2,289	39,322
35-39	2,294	323	52	10	1	0	2,680	43,294
40-44	2,079	382	102	38	6	0	2,607	47,094
45-49	2,081	462	162	62	21	1	2,789	49,585
50-54	1,933	502	167	66	20	7	2,695	49,568
55-59	1,688	368	129	43	15	4	2,247	47,540
60-64	1,232	240	59	26	2	5	1,564	43,932
65 and over	717	81	21	10	5	3	837	40,183
All Ages	15,414	2,615	724	256	70	20	19,099	\$44,802

Retired Members and Beneficiaries

Distribution of Retirees and Beneficiaries by Age and Retirement Type

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 30	0	0	0	1	1	38	40
30-34	0	3	5	0	0	11	19
35-39	0	17	11	0	1	23	52
40-44	0	25	18	1	0	16	60
45-49	0	50	43	5	1	41	140
50-54	731	126	59	16	0	70	1,002
55-59	3,144	226	82	30	2	126	3,610
60-64	5,832	266	87	43	0	234	6,462
65-69	6,835	246	73	40	1	335	7,530
70-74	4,476	175	46	31	2	448	5,178
75-79	2,487	97	19	19	0	396	3,018
80-84	1,478	61	2	11	0	420	1,972
85 and Over	1,310	53	3	13	0	621	2,000
All Ages	26,293	1,345	448	210	8	2,779	31,083

Distribution of Average Annual Disbursements to Retirees and Beneficiaries by Age and Retirement Type

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Average
Under 30	\$0	\$0	\$0	\$19,140	\$276	\$7,154	\$7,281
30-34	0	10,897	328	0	0	7,226	5,991
35-39	0	7,958	5,411	0	93	8,097	7,329
40-44	0	8,870	562	11,451	0	11,021	6,994
45-49	0	10,158	2,434	13,917	183	11,479	8,236
50-54	15,415	12,074	3,862	15,815	0	14,347	14,246
55-59	21,867	13,880	4,651	18,383	1,715	13,596	20,647
60-64	23,989	12,503	5,067	14,141	0	17,377	22,957
65-69	22,561	13,267	6,091	15,830	186	17,427	21,830
70-74	20,711	10,727	6,302	14,891	43	16,486	19,837
75-79	18,312	11,762	5,856	10,495	0	16,432	17,727
80-84	16,777	11,008	503	5,018	0	15,818	16,312
85 and Over	14,517	11,038	18,725	8,322	0	11,799	13,547
All Ages	\$21,153	\$12,208	\$4,752	\$14,145	\$532	\$14,994	\$19,927

Retired Members and Beneficiaries (continued)

Distribution of Retirees and Beneficiaries by Years Retired and Retirement Type

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 5 Yrs	9,066	200	86	72	1	970	10,395
5-9	7,480	188	79	59	3	743	8,552
10-14	4,688	237	106	32	0	472	5,535
15-19	2,469	321	67	22	1	286	3,166
20-24	1,438	206	54	15	1	177	1,891
25-29	697	105	31	5	0	79	917
30 and Over	455	88	25	5	2	52	627
All Years	26,293	1,345	448	210	8	2,779	31,083

Distribution of Average Annual Disbursement to Retirees and Beneficiaries by Years Retired and Retirement Type

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Average
Under 5 Yrs	\$23,340	\$14,208	\$4,710	\$17,381	\$276	\$17,096	\$22,384
5-9	23,550	13,496	3,258	14,221	97	15,795	22,395
10-14	20,200	13,928	4,971	14,689	0	13,377	19,026
15-19	16,273	11,309	7,320	10,415	2,139	14,126	15,341
20-24	14,708	10,870	4,469	7,704	1,291	10,493	13,540
25-29	12,508	10,912	3,833	7,577	0	9,776	11,770
30 and Over	8,105	8,243	3,563	5,452	128	7,068	7,811
All Years	\$21,153	\$12,208	\$4,752	\$14,145	\$532	\$14,994	\$19,927

Retired Members and Beneficiaries (continued)

Distribution of Total Annual Aggregate Disbursements to Retirees and Beneficiaries by Attained Age and Retirement Type (does not Include PPPA Payments)

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 30	\$0	\$0	\$0	\$19,140	\$276	\$271,835	\$291,251
30-34	0	32,691	1,640	0	0	79,491	113,822
35-39	0	135,284	59,520	0	93	186,230	381,127
40-44	0	221,738	10,118	11,451	0	176,328	419,635
45-49	0	507,904	104,673	69,584	183	470,646	1,152,990
50-54	11,268,274	1,521,349	227,847	253,043	0	1,004,256	14,274,769
55-59	68,750,043	3,136,806	381,405	551,478	3,430	1,713,080	74,536,242
60-64	139,905,748	3,325,831	440,835	608,073	0	4,066,312	148,346,799
65-69	154,203,724	3,263,589	444,610	633,183	186	5,838,036	164,383,328
70-74	92,703,931	1,877,304	289,909	461,622	85	7,385,544	102,718,395
75-79	45,541,253	1,140,883	111,256	199,396	0	6,507,128	53,499,916
80-84	24,796,211	671,495	1,006	55,203	0	6,643,462	32,167,377
85 and Over	19,016,679	585,017	56,176	108,185	0	7,327,061	27,093,118
Total	\$556,185,863	\$16,419,891	\$2,128,995	\$2,970,358	\$4,253	\$41,669,409	\$619,378,769

Distribution of Total Annual Aggregate Disbursements to Retirees and Beneficiaries by Years Retired and Retirement Type (does not Include PPPA Payments)

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 5 Yrs	\$211,603,836	\$2,841,502	\$405,047	\$1,251,467	\$276	\$16,583,064	\$232,685,192
5-9	176,150,435	2,537,172	257,421	839,013	291	11,735,456	191,519,788
10-14	94,696,847	3,300,855	526,897	470,051	0	6,313,769	105,308,419
15-19	40,179,270	3,630,086	490,417	229,124	2,139	4,040,067	48,571,103
20-24	21,149,469	2,239,166	241,307	115,556	1,291	1,857,175	25,603,964
25-29	8,718,016	1,145,749	118,825	37,886	0	772,327	10,792,803
30 and Over	3,687,990	725,361	89,081	27,261	256	367,551	4,897,500
Total	\$556,185,863	\$16,419,891	\$2,128,995	\$2,970,358	\$4,253	\$41,669,409	\$619,378,769

Distribution of Plan Costs by Benefit Formula

Benefit Formula	Accrued Liability	% of Pool	6/30/2016 Payroll	% of Pool
2.0% @62	\$ 104,148,694	0.7%	\$ 448,400,431	20.8%
2.0% @60	1,085,074,313	7.3%	231,519,627	10.8%
2.0% @55	5,481,551,587	37.1%	685,804,667	31.8%
2.5% @55	2,970,124,363	20.1%	287,482,707	13.3%
2.7% @55	3,558,569,453	24.1%	366,574,556	17.0%
3.0% @60	1,418,935,721	9.6%	133,860,985	6.2%
Inactive	156,883,463	1.1%	0	0.0%
Total	\$ 14,775,287,594		\$ 2,153,642,973	

APPENDIX E
GLOSSARY OF ACTUARIAL TERMS

Glossary of Actuarial Terms

Accrued Liability *(also called Actuarial Accrued Liability or Entry Age Normal Accrued Liability)*

The total dollars needed as of the valuation date to fund all benefits earned in the past for *current* members.

Actuarial Assumptions

Assumptions made about certain events that will affect pension costs. Generally, assumptions can be broken down into two categories: demographic and economic. Demographic assumptions include such things as mortality, disability, and retirement rates. Economic assumptions include discount rate, salary growth, and inflation.

Actuarial Methods

Procedures employed by actuaries to achieve certain funding goals of a pension plan. Actuarial methods include funding method, setting the length of time to fund the Accrued Liability, and determining the Value of Assets.

Actuarial Valuation

The determination, as of a valuation date, of the Normal Cost, Accrued liability, and related actuarial present values for a pension plan. These valuations are performed annually or when an employer is contemplating a change to their plan provisions.

Amortization Bases

Separate payment schedules for different portions of the Unfunded Liability. The total Unfunded Liability of a Risk Pool or non-pooled plan can be segregated by "cause," creating "bases" and each such base will be separately amortized and paid for over a specific period of time. However, all bases are amortized using investment and payroll assumptions from the current valuation. This can be likened to a home having a first mortgage of 24 years remaining payments and a second mortgage that has 10 years remaining payments. Each base or each mortgage note has its own terms (payment period, principal, etc.)

Generally, in an actuarial valuation, the separate bases consist of changes in unfunded liability due to contract amendments, actuarial assumption changes, actuarial methodology changes, and/or gains and losses. Payment periods are determined by Board policy and vary based on the cause of the change.

Amortization Period

The number of years required to pay off an Amortization Base.

Class 0 Benefit Surcharge

Class 0 benefit surcharge is the increase in normal cost for a given benefit formula above the baseline PEPR 2% at 57 benefit formula.

Class 1 Benefits

Class 1 benefits have been identified as additional benefits which have a significant, ongoing effect on the total plan cost. In some cases, a Class 1 benefit may be an alternate benefit formula. These benefits vary by employer across the risk pool. Agencies contracting for a Class 1 benefit will be responsible for the past service liability associated with such benefit and will be required to pay a surcharge established by the actuary to cover the ongoing cost (normal cost) of the Class 1 benefit.

Class 2 Benefits

Class 2 benefits have been identified to be the ancillary benefits providing one-time increases in benefits. These benefits vary by employer across the risk pool. Agencies contracting for a Class 2 benefit will be responsible for the past service liability associated with such benefit.

Class 3 Benefits

Class 3 benefits have been identified to be additional benefits which have a minimal effect on the total plan cost. Class 3 benefits may vary by rate plan within each risk pool. However, the employer contribution rate will not vary within the risk pool due to the Class 3 benefits.

Classic member (under PEPRA)

A classic member is a member who joined CalPERS prior to January, 1, 2013 and who is not defined as a new member under PEPRA. (See definition of new member below)

Discount Rate Assumption

The actuarial assumption that was called "investment return" in earlier CalPERS reports or "actuarial interest rate" in Section 20014 of the California Public Employees' Retirement Law (PERL).

Entry Age

The earliest age at which a plan member begins to accrue benefits under a defined benefit pension plan. In most cases, this is the age of the member on their date of hire.

(The assumed retirement age minus the entry age is the amount of time required to fund a member's total benefit. Generally, the older a member is at hire, the greater the Normal Cost. This is mainly because there is less time to earn investment income to fund the future benefits.)

Entry Age Normal Cost Method

An actuarial cost method designed to fund a member's total plan benefit over the course of his or her career. This method is designed to yield a rate expressed as a level percentage of payroll.

(The assumed retirement age less the entry age is the amount of time required to fund a member's total benefit. Generally, the older a member on the date of hire, the greater the entry age normal cost. This is mainly because there is less time to earn investment income to fund the future benefits.)

Fresh Start

A Fresh Start is when multiple amortization bases are collapsed to one base and amortized together over a new funding period.

Funded Status

A measure of how well funded, or how "on track" a plan or risk pool is with respect to assets versus accrued liabilities. A ratio greater than 100 percent means the plan or risk pool has more assets than liabilities and a ratio less than 100 percent means liabilities are greater than assets.

GASB 68

Statement No. 68 of the Governmental Accounting Standards Board. The accounting standard governing a state or local governmental employer's accounting and financial reporting for pensions. GASB 68 replaces GASB 27 effective the first fiscal year beginning after June 15, 2014.

New Member (under PEPRA)

A new member includes an individual who becomes a member of a public retirement system for the first time on or after January 1, 2013, and who was not a member of another public retirement system prior to that date, and who is not subject to reciprocity with another public retirement system.

Normal Cost (also called Total Normal Cost)

The annual cost of service accrual for the upcoming fiscal year for active employees. The normal cost should be viewed as the long term contribution rate.

Pension Actuary

A business professional that is authorized by the Society of Actuaries, and the American Academy of Actuaries to perform the calculations necessary to properly fund a pension plan.

PEPRA

The California Public Employees' Pension Reform Act of 2013

Prepayment Contribution

A payment made by the employer to reduce or eliminate the year's required employer contribution.

Present Value of Benefits (PVB)

The total dollars needed as of the valuation date to fund all benefits earned in the past or expected to be earned in the future for *current* members.

Risk Pool

Utilizing the law of large numbers, a risk pool is a collection of employer plans for the purpose of sharing risk. If a pooled plan has active members at the time of valuation, it belongs to the risk pool composed of all other pooled plans with the same benefit formula.

Side Fund

At the time a plan joined a risk pool, a Side Fund was created to account for the difference between the funded status of the risk pool and the funded status of the plan. The plan's Side Fund is amortized on an annual basis. As of the June 30, 2013 actuarial valuations, the side fund is treated as a liability as opposed to an asset. Prior to June 30, 2013, a positive side fund conveyed that a public agency had a surplus when risk pooling began June 30, 2003. Conversely, a negative side fund signified that a public agency had an unfunded liability that required elimination through an amortization payment schedule. After June 30, 2013 a positive side fund signifies that an agency has an unfunded liability, while a negative side fund indicates a surplus asset.

Unfunded Liability (UAL)

When a plan or pool's Value of Assets is less than its Accrued Liability, the difference is the plan or pool's Unfunded Liability. If the Unfunded Liability is positive, the plan or pool will have to pay contributions exceeding the Normal Cost.

City Council Agenda Report
Continuation of Discussion on Authorizing Participation in the Public Agencies Post-Employment Benefits Section
115 Trust Program to Pre-Fund Pension and Other Post-Employment Benefits
Meeting Date: April 10, 2017
Page 2 of 5

The table below provides an overview of the two firms:

	Public Agency Retirement Services (PARS)	Public Financial Management (PFM)
Founded in	1984	1975
Headquarters	Newport Beach	Philadelphia
Office Locations in California	Newport Beach - PARS San Francisco - HighMark	San Francisco & Los Angeles
Core Business	Administration of 115 Trust for prefunding OPEB/Pension	Investment advisory services
Programs	Section 115 Trust for Pensions & OPEB, supplemental defined benefit programs, alternate retirement systems for part-time employees, customized defined contribution programs to supplement CalPERS	Section 115 Trusts for Pension & OPEB, financial advisory, asset management and consulting services
IRS Private Letter Ruling	Yes; multiple employer	Yes; multiple employer trust No; single employer trust
Investment Manager	HighMark Capital Management	PFM Asset Management
Trustee	US Bank (Los Angeles)	Multiple employer plan - Wells Fargo Single employer plan - TBD
Plans under Administration	1,400+ plans for 800+ public agencies only	200+ plans, mostly public agencies
Section 115 Pension & OPEB Trust Clients	250+, including 72 for pension prefunding (such as Alameda, Brisbane, Capitola, Half Moon Bay, Morgan Hill, Napa, Palo Alto, Rohnert Park, Sausalito, Santa Clara, Tiburon)	115+, including 2 for pension prefunding (Santa Cruz and Chino Valley Fire)
Annual Fees for Assets under \$5 million	Approx. \$26,500	Approx. \$28,500
Investment Assets under Administration	Approx. \$2.2 billion (PARS) Approx. \$15.2 billion (HighMark)	Approx. \$62.0 billion
Investment Options	5 risk-tolerance levels (active or passive), and custom option	Custom only
Performance Returns	Actual 5-year historical returns of 5 model portfolios:* <ul style="list-style-type: none"> - Capital Appreciation: 9.53% - Balanced: 8.12% - Moderate: 7.24% - Moderately Conservative: 5.51% - Conservative: 4.07% <i>* Returns as of December 31, 2016</i>	Composite returns only (not based on historical returns of <u>actual</u> portfolios)
Minimums	No minimum contribution; No minimum fee; No start up fees; No trade or transactions fees	Minimum fee: \$20,000 across all accounts; Account fee: \$500; Trade fee: \$8/trade

PENSION RATE STABILIZATION PROGRAM



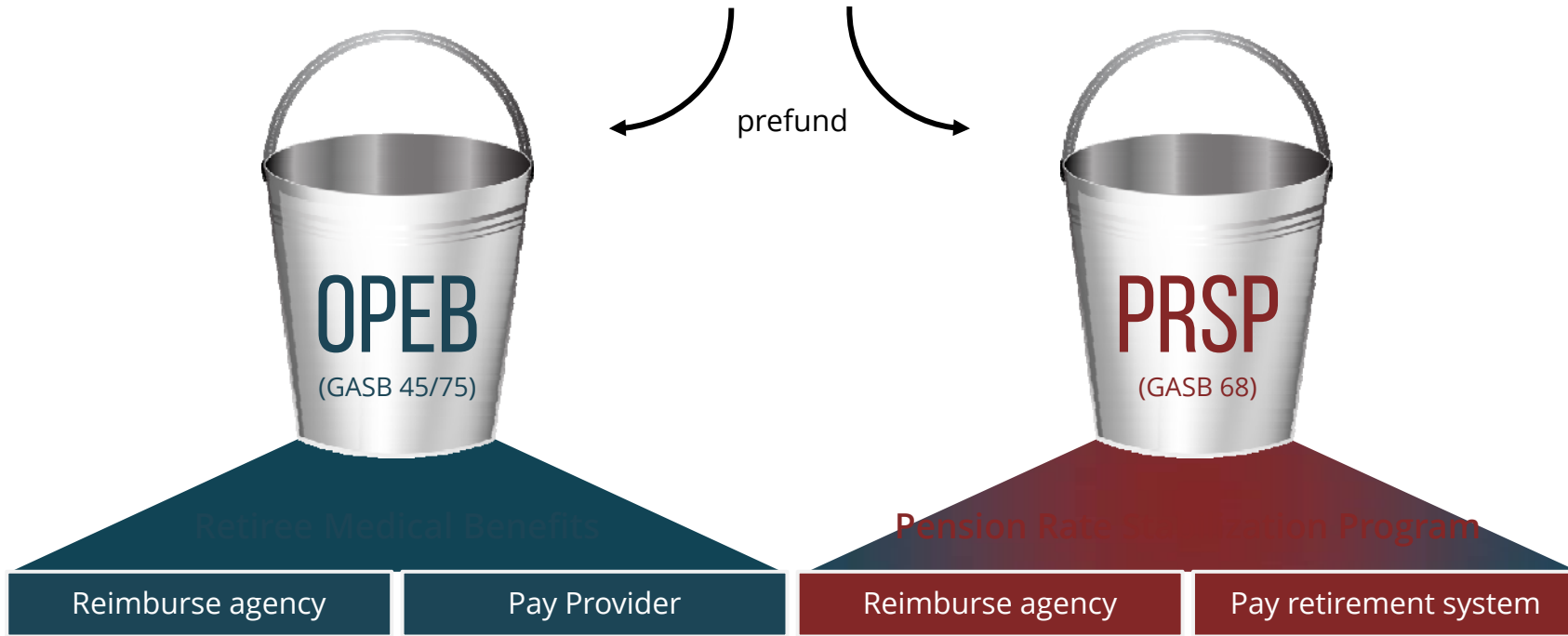
PENSION FUNDING STATUS

As of June 30, 2016, Mid-Peninsula Water District’s CalPERS pension plan is funded as follows*:

Actuarial Liability	\$5.9 M
Assets	\$4.4 M
Unfunded Liability	\$1.5 M
Funded Ratio	74.34%
Employer Contribution Amount (FY 17-18)	\$244,660
Projected Employer Contribution Amount (FY 24-25)	\$364,364 (48.9% ↑)

* Data from Agency’s 2015-16 CalPERS Actuarial valuation, with midpoint adjustments for discount rate projections

THE PARS IRS-APPROVED COMBINATION 115 TRUST



- Assets are sub-accounted for separately
- Pre-fund one now and the other later
- Addresses unfunded liabilities
- Can choose different investment risk tolerance levels for each

- Can access funds at anytime; OPEB for OPEB and pension for pension
- Assets (OPEB and Pension) aggregate and reach lower fees on tiered schedule sooner – saving money!
- No cost to set up; no fees until assets are added; ***no minimum fee***

PARS PRSP CLIENT LIST – BAY AREA (106+ TO DATE)

CITIES & TOWNS

City of Alameda
City of Brisbane
City of Capitola
City of Daly City
City of Dublin
City of Half Moon Bay
City of Healdsburg
City of Morgan Hill
City of Napa
City of Norwalk

City of Oakley
City of Palo Alto
City of Redwood City
City of Rohnert Park
City of Santa Clara
City of Sausalito
City of Union City
Town of Colma
Town of Los Gatos
Town of Tiburon

COUNTIES

County of Solano

EDUCATIONAL DISTRICTS

Campbell Union HSD

SPECIAL DISTRICTS

Central Contra Costa Sanitary District
Delta Diablo (Sanitation District)
Moraga-Orinda Fire Protection District
Napa County Mosquito Abatement District
Novato Sanitary District
Southern Marin Fire Protection District
West Bay Sanitary District

HIGHMARK CAPITAL MANAGEMENT RETURNS

RETURNS AS OF SEPTEMBER 30, 2017

	Equity (%)	1 Year	3 Years	5 Years	10 Years
Capital Appreciation	65-85%	14.07%	7.54%	9.56%	--
Balanced	50-70%	12.25%	6.63%	8.12%	5.22%
Moderate	40-60%	10.14%	6.00%	7.03%	5.07%
Moderately Conservative	20-40%	6.51%	4.67%	5.14%	4.77%
Conservative	5-20%	3.88%	3.69%	3.71%	4.29%

** Past performance does not guarantee future results*

WHY PREFUND PENSION OBLIGATIONS?

1

Complete Local Control over Assets

District has complete control over contributions and disbursements; timing, amount, and risk tolerance level

2

Pension Rate Stabilization

Assets can be transferred to retirement system plan at the District's direction, which can reduce or eliminate large fluctuations in Employer contributions to retirement system

3

Rainy Day Fund

Emergency source of funds when Employer revenues are impaired based on economic or other conditions

4

Lower Costs

115 Trust might have lower overall administrative and investment management costs compared to the retirement system

WHY PREFUND PENSION OBLIGATIONS?

5

Addresses Pension Liabilities for GASB 68

Contributions placed in an exclusive benefit trust addresses District's unfunded pension liability

6

Improved Credit Ratings

Rating agencies may look favorably upon actions to reduce liabilities

7

Actuarially Sound Retirement System

Provide integrity and security for the source of funding for retirement benefits

8

Diversified Investing/Potential for Greater Return than General Fund

Can choose risk tolerance level for District's unique needs



AGENDA ITEM NO. 8.D.

DATE: November 15, 2017
TO: Board of Directors
FROM: Tammy Rudock, General Manager

SUBJECT: DISCUSS SECOND DRAFT MPWD DEBT MANAGEMENT POLICY

RECOMMENDATION

Discuss the second DRAFT MPWD Debt Management Policy.

FISCAL IMPACT

There will be professional service expenses as a result of the involvement of and review by District Counsel and the MPWD's Municipal Finance Advisor. Less than \$2,500 is anticipated.

BACKGROUND

STATE LAW

Effective January 1, 2017, Senate Bill 1029 (SB 1029) amended Section 8855(i) of the California Government Code to require that local government issuers of public debt adopt a debt management policy, which included specific provisions concerning the use of debt and provided a framework for debt issuance, capital planning, and post issuance debt administration. It created the following major changes to the current law:

- Required the California Debt and Investment Advisory Commission (CDIAC) to track and report on all state and local outstanding debt until fully repaid or redeemed; and
- Required that the report of proposed debt include a certification by the issuer that it has adopted local debt policies, which include specified provisions concerning the use of debt and that the contemplated debt issuance is consistent with those local debt policies; and
- Required a state or local public agency to submit an annual report for any issue of debt.

SECURITIES AND EXCHANGE COMMISSION (SEC) RECOMMENDATIONS

The SEC recommends that issuers of municipal securities adopt policies and procedures to govern compliance, and implement training with respect to their initial disclosure and continuing disclosure undertakings.

GFOA BEST PRACTICES

The GFOA (Government Finance Officers Association) defines debt management policies as “written guidelines, allowances, and restrictions that guide the debt issuance practices of state and local governments, including the issuance process, management of a debt portfolio, and adherence to various laws and regulations.”

A debt management policy further demonstrates a commitment to long-term capital and financial planning, and adherence, according to the GFOA, “signals to rating agencies and the capital markets that a government is well managed and likely to meet its debt obligations in a timely manner.”

The GFOA recommends that a debt management policy should be reviewed periodically (and updated if necessary) and should address at least the following:

1. Debt Limits;
2. Debt Structuring Practices;
3. Debt Issuance Practices; and
4. Debt Management Practices.

Finally, the GFOA supports as a best practice that a debt management policy “should be approved by the issuers governing body to provide credibility, transparency, and ensure that there is a common understanding among elected officials and staff regarding the issuers approach to debt financing.”

DISCUSSION

A DRAFT Debt Management Policy was introduced last month and discussed with the Board of Directors. Based on the input received during that discussion and further review and collaboration with the MPWD’s Municipal Finance Advisor (MFA), District Counsel, and the MPWD’s Financial Auditor, the DRAFT policy was refined into a second DRAFT, which is attached (in strikethrough format) for consideration. Bud Levine of Wulff, Hansen & Company (MFA) will be at the Board meeting to provide assistance with further development of the policy and respond to questions.

The policy was developed in accordance with CDIAC requirements and pursuant to SB 1029, and was designed to meet the following objectives:

- Identify the purpose of the debt issuance and use of debt proceeds;
- Identify the types of debt that may be issued;
- Describe the relationship of debt to the Capital Improvement Program (CIP) and MPWD budget;

- Ensure the issuance of debt is consistent with public policy objectives of the MPWD, as determined by the Board of Directors; and
- Implement and maintain a system of internal controls to ensure that debt proceeds will be directed to the intended use in accordance with all applicable statutory and policy requirements.

The policy is subject to periodic review and update by the MPWD, either as the result of material changes in best practices, market conditions, or if any legal and/or regulatory requirements warrant such an update. All updates require approval by the Board.

Attachment: Second DRAFT MPWD Debt Management Policy

BOARD ACTION: APPROVED:_____ DENIED:_____ POSTPONED:_____ STAFF DIRECTION:_____

UNANIMOUS_____ STUEBING_____ WARDEN_____ VELLA_____ LINVILL_____ ZUCCA_____

DEBT MANAGEMENT POLICY

1. POLICY STATEMENT

The Mid-Peninsula Water District (District) funds its capital projects and meets other financing needs through a combination of current operating revenues, available reserves, outside funding (e.g., grants), and prudently issued debt. This policy documents the goals and guidelines of the District for the issuance and use of debt instruments.

Debt includes financing as a way to raise working capital or capital expenditures by selling bonds, bills, certificates, or notes to individual and/or institutional investors. In return for lending the money, the individuals or institutions become creditors and receive a promise to repay principal and interest on the debt.

To achieve optimal credit ratings and endorse prudent financial management, the District is committed to long-term capital and financial planning, and continual review of its financing structure to optimize the overall cost of debt.

The issuance of debt by the District to finance major capital projects or to refinance existing obligations will only occur after the transaction is evaluated to be fiscally prudent and responsible under the prevailing economic conditions. Prior approval by the Board of Directors (Board) is required for the issuance of new debt or for the refinancing of existing debt.

2. PURPOSE OF POLICY

The purpose of this Debt Management Policy (Debt Policy) is to establish and maintain parameters for issuing debt, and promote objectivity in the decision-making process.

The District will adhere to the following legal requirements for the issuance of public debt:

- State law, which authorizes the issuance of debt;
- Federal and state law, which govern the eligibility of the debt for tax-exempt status;
- Federal and state law, which govern the issuance of taxable debt;
- Federal and state law, which govern disclosure, sale, and trading of the debt, both before and subsequent to issuance; and
- Generally Accepted Accounting Principles (GAAP).

This Debt Policy is intended to comply with Government Code Section 8855(i), effective January 1, 2017, and shall govern all debt issued by the District. The District hereby recognizes that a fiscally prudent debt policy is required to:

- Maintain the District's sound financial position.
- Ensure the District has the flexibility to respond to changes in future service priorities, revenues, and operating expenses.

- Protect the District's credit-worthiness.
- Ensure that all debt is structured to protect current and future taxpayers, ratepayers and constituents of the District.
- Ensure that the District's debt is consistent with the District's planning goals and objectives and eCapital improvement program (CIP) or capital budget, as applicable.

3. PURPOSE AND USE OF DEBT

~~The District will utilize reasonable d~~Debt financing ais an acceptable and appropriate approach to fund the District's long-term capital improvements as approved by the Board of Directors and, thus, ensure inter-generational equity of such major improvements among existing and future users of the system. Debt can be issued to fund the capital cost of planning, pre-design, design, land and/or easement acquisition, construction, and related fixtures, equipment, and others costs as permitted by law.

3.1 Long-Term Debt. Long-term debt may be issued to finance the construction, acquisition, and rehabilitation of capital improvements and facilities, equipment and land to be owned and operated by the District. Long-term debt financings are appropriate:

- When a project to be financed is necessary to provide District services.
- When the project to be financed will benefit constituents over ~~several~~10+ years.
- When total long-term debt financing does not constitute an unreasonable burden to the District and its taxpayers or ratepayers.
- When the debt is used to refinance outstanding debt to reduce the total cost of the debt or to realize other benefits of a debt restructuring, such as increased flexibility in the use of cash and reserves.
- When the weighted average maturity of the debt (or the portion of the debt allocated to the project) will not exceed the average useful life of the project to be financed by more than 20%, unless specific conditions exist that would mitigate the extension of time to repay the debt and it would not cause the District to violate any covenants to maintain the tax-exempt status of such debt, if applicable.

Long-term debt financings will not ~~generally~~ be considered appropriate for current operating expenses and routine maintenance expenses.

The District may use long-term debt financings subject to the following conditions:

- The project to be financed must be approved by the District Board of Directors;
- The District estimates that sufficient revenues will be available to service the debt through its maturity; and
- The District determines that the issuance of the debt will comply with the applicable state and federal law.

Periodic reviews of outstanding long-term debt will be undertaken to identify refunding opportunities. Refundings will be considered (within federal tax law constraints, if applicable) if and when there is a net economic benefit of the refunding. Refundings that are non-economic may be undertaken to achieve District objectives relating to changes in covenants, call provisions, operational flexibility, tax status of the issuer, or the debt service profile.

Refundings that produce a net present value savings of at least 4% of the refunded debt will be considered economically viable. Refundings that produce a net present value savings of less than 4% or negative savings will be considered on a case-by-case basis, and are subject to Board approval.

3.2 Short-term debt. Short term borrowing such as commercial paper and lines of credit will be considered as an interim source of funding in anticipation of long-term borrowing. Short-term debt may be issued for any purpose for which long-term debt may be issued, including capitalized interest and other financing-related costs. Prior to issuance of the short-term debt, a reliable revenue source shall be identified to secure repayment of the debt. The final maturity of the debt issued to finance the project shall be consistent with the economic or useful life of the project and unless the Board determines that extraordinary circumstances exist, must not exceed seven years.

3.3 Short-term debt may also be issued to provide financing for the District’s operational cash flows in order to maintain a steady and even cash flow balance, and due within one year, and may be rolled over or extended if necessary. Short-term debt may also be used to finance short-lived capital projects, such as undertaking lease-purchase financing for equipment.

~~3.3 — Financings on Behalf of Other Entities. The District may also find it beneficial to issue debt on behalf of other governmental agencies or private third parties to further the public purposes of District. In such cases, the District shall take reasonable steps to confirm the financial feasibility of the project to be financed, the financial solvency of any borrower, and that the issuance of such debt is consistent with the policies set forth herein.~~

4. TYPES OF DEBT THAT MAY BE ISSUED

The following are types of debt the District could issue:

- ~~A. — New Money Debt. New money debt is issued to finance the cost of capital improvement projects or other large or extraordinary costs as approved by the Board;~~
- ~~B. — Refunding Debt. Refunding is debt issued to refinance (refund) previously issued outstanding debt. The District may issue refunding debt to refinance existing principal and/or interest on outstanding debt to achieve debt service savings, restructure scheduled debt service, or convert from variable to fixed interest rate, change or modify the source(s) of payment and security for the refunded debt, or modify covenants otherwise binding on the District;~~
- ~~C. — Lease Financings. Lease revenue bonds, certificates of participation (known as “COPs”) and lease-purchase transactions are examples of lease financings.~~
- ~~D. — State Revolving Funds (SRF). The SRF loan program is a low or zero interest loan program made available for specific construction projects. SRF loans are generally structured such that the~~

~~agency is required to contribute a percentage of the total project cost and receive loan proceeds from the State of California for the balance; and~~

~~E. Lines of credit. The District has the authority to secure lines of credits when it is deemed prudent and advantageous to do so.~~

The District may ~~from time to time~~ find that ~~other forms of~~ debt financings would be beneficial to further its public purposes and ~~may~~ the Board of Directors may approve such debt without an amendment of this Debt Policy. Debt shall be issued as fixed rate debt unless the District makes a specific determination as to why a variable rate issue would be beneficial to the District in a specific circumstance.

5. RELATIONSHIP OF DEBT TO CAPITAL IMPROVEMENT PROGRAM AND BUDGET

The District is committed to long-term capital planning. ~~The District intends to and may~~ issue debt for the purposes stated in this Debt Policy ~~and to implement policy decisions incorporated in for~~ implementation of the District's capital budget and ~~capital improvement plan~~ CIP.

5.1 The District's Debt Management Policy, Reserve Policy, and Investment Policy will be considered in the decision-making framework utilized in the preparation of the District's CIP and long-term capital and financial planning, and its fiscal year budgeting process.

5.2 The District ~~shall strive to will~~ fund the upkeep and maintenance of its infrastructure and facilities improvements due to normal wear and tear through the expenditure of available operating revenues rather than incurring debt. ~~The District shall seek to avoid the use of debt to fund infrastructure and facilities improvements that are the result of normal wear and tear.~~

5.3 The District shall integrate its debt issuances with the goals of its ~~capital improvement program~~ CIP by timing the issuance of debt to ensure that projects are available when needed in furtherance of the District's public purposes. ~~, or may be less expensive due to construction costs or low interest rates~~

~~5.4 The District shall seek to avoid the use of debt to fund infrastructure and facilities improvements in circumstances when the sole purpose of such debt financing is to reduce annual budgetary expenditures.~~

~~5.5 The District shall seek to issue debt in a timely manner to avoid having to make unplanned expenditures for capital improvements or equipment from its general funds.~~

6. DEBT ISSUANCE

The District is committed to long-term financial planning, maintaining appropriate reserves and employing prudent practices in governance, management and budget administration, and systematic capital planning. The District intends to will issue debt for the purposes stated in this Debt Policy and as approved by the Board of Directors to implement policy decisions incorporated

in the District's annual operations and capital budgets. Adoption of this Debt Policy will help ensure that debt is issued and managed in a manner that protects the public interest.

6.1 Credit Rating. ~~The District intends to protect taxpayers, ratepayers and constituents by using conservative financing methods and techniques so as to obtain the highest practical credit ratings (if applicable) and the lowest practical total borrowing costs.~~ The District will seek to do everything necessary to maintain optimum credit ratings for debt instruments. District staff, working with the District's Municipal Finance Advisor, shall be responsible for determining ~~whether a rating will be required on a particular financing, and~~ which of the major rating agencies shall be asked to provide such a rating.

6.2 Method of Sale. Debt is typically issued under either a competitive or negotiated sale, ~~but may also be sold in a~~ private placement. ~~The District shall have the flexibility to determine which method of sale is appropriate for each debt issuance.~~ Determination of the appropriate method of sale will rest with the General Manager and the District's Municipal Finance Advisor. There are a number of market factors that will affect the success of a debt offering and each should be carefully considered before selecting a method of sale. These factors include, but are not limited to: 1) market perception of the District's credit quality, 2) interest rate volatility, 3) size of the proposed sale, term and average life, 4) complexity of the proposed issue, and 5) competition with other issuers for investor interest.

7. DEBT ADMINISTRATION

7.1 The District will comply with:

- A. Applicable state and federal law as it pertains to the maximum term of debt and the procedures for levying and imposing any related taxes, assessments, rates and charges; and
- B. Applicable policies regarding initial bond disclosure, continuing disclosure, post-issuance compliance, and investment of bond proceeds. Without limiting the foregoing, the District will periodically review the requirements of and will remain in compliance with the following:
 1. Any continuing disclosure undertakings entered into by the District in accordance with SEC Rule 15c2-12;
 2. Any federal tax compliance requirements, including, without limitation, arbitrage and rebate compliance;
 3. The District's investment policies as they relate to the use and investment of bond proceeds; and
 4. California Government Code Section 8855(i) and the annual reporting requirements therein.

7.2 Proceeds of debt will be held either by:

- A. A third-party trustee or fiscal agent, which will disburse such proceeds to or upon the order of the District upon the submission of one or more written requisitions by the General Manager of the District (or their written designee); or
- B. The District, to be held and accounted for in a separate fund or account to ensure debt proceeds are expended only for the purposes for which the debt was issued, the expenditure of which will be carefully documented by the District in records compliance with current accounting standards and subject to the District's annual audit.

7.3 Investment of Debt Proceeds. Proceeds of debt will be invested until used for the intended project(s) in order to maximize utilization of the public funds. The investments will be made to obtain the highest level of safety. The General Manager will oversee the investment of bond proceeds in a manner to avoid, if possible, and minimize any potential negative arbitrage over the life of the bond issue, while complying with arbitrage and tax provisions.

7.4 Debt Coverage Target. ~~The District will not engage in debt financing unless the proposed obligation, when combined with all existing debts, will result in acceptable debt coverage ratios.~~ In determining the affordability of a proposed debt financing, the District will perform an analysis comparing projected annual net revenues, after payment of operating and maintenance expenditures, to estimated annual debt service and the estimate debt coverage ratio. The debt coverage ratio is the amount of net cash flow available, divided by the annual interest and principal payments on debt.

The District's existing debt covenants for its 2016 Certificates of Participation capital debt financing require a legal debt coverage ratio of at least 1.25.

7.5 Debt Service Reserve Balance. District staff will monitor dedicated debt service reserve fund balances, ensuring compliance with related reserve requirements (if applicable), and periodically review the advisability of prepayment or refunding of related debt. The financial advantages of a current refunding must outweigh the cost of issuing the refunding debt by a sufficient margin to justify it. (The California Special Districts Association's best practices for debt management recommend at least 3.0% of the principal amount of the bonds being refunded, determined on a net present value basis.)

7.6 Call Options/Redemption Provisions. District staff will evaluate and recommend to the Board the use of a call option, if any, and a call protection period for each issuance. A call option, or optional redemption provision, gives the District the right to prepay or retire debt prior to its stated maturity. The option may permit the District to achieve interest savings in the future through refunding the debt. The cost of call options can vary widely, depending largely on market conditions, an evaluation of factors such as the call premium, time until the debt may be called at a premium or at par, and interest rate volatility.

7.7 Quarterly Reports. District staff will provide quarterly review and reporting to the Board of the debt's financial performance, including capital expenditures and interest earnings.

7.8 Debt Service Payments. Necessary appropriations for annual debt service requirements will be reflected in the District's annual budget. Staff is responsible for timely annual payments.

7.9 Continuing Disclosure Requirements. The District is responsible for ensuring that the District's annual financial statements, continuing disclosure reports, and material event notifications are posted on the MPWD website and/or the Electronic Municipal Market Access (EMMA) website of the Municipal Securities Rulemaking Board. The District may also contract with third-party consultant(s) to comply with its continuing disclosure obligations, and with Securities and Exchange Commission Rule 15c2-12(b)(5).

The District shall submit an annual report to CDIAC for any issuance of debt for which it has submitted a report of final sale on or after January 1, 2017. The annual report shall comply with the requirements of Government Code Section 8855 and related regulations.

[Failure to comply with disclosure requirements may restrict the ability of the District to issue debt.](#)

7.10 Investor Relations. Information that the District intends to make available to the investing public, including bondholders, rating analysts, investment advisors, or any other members of the investment community shall be filed on the MPWD website and the EMMA website.

The District will maintain proactive communications with the investment community, including rating agencies and investors, to ensure future capital market access at the lowest possible interest rates.

7.11 Records Retention. A copy of all relevant documents and records will be maintained by the District through the final maturity of the debt financing plus ten (10) years. Relevant documents and records will include sufficient documentation to support the requirements related to maintaining the tax-exempt status of the debt financing.



AGENDA ITEM NO. 8.E.

DATE: November 15, 2017
TO: Board of Directors
FROM: Tammy Rudock, General Manager

SUBJECT: DISCUSS SECOND DRAFT MPWD CASH RESERVE POLICY

RECOMMENDATION

Discuss the second DRAFT MPWD Cash Reserve Policy.

FISCAL IMPACT

None.

BACKGROUND

MPWD RESERVE POLICY

The MPWD's existing Reserve Policy was approved by the Board on December 13, 2007, per Resolution 2007-13.

GFOA BEST PRACTICES

The GFOA (Government Finance Officers Association) defines working capital as a calculation of current assets less current liabilities that should be maintained "to mitigate current and future risks (e.g., revenue shortfalls and unanticipated expenses) and to ensure stable services and rates." It recommends that local governments "adopt a target amount of working capital to maintain in their enterprise funds that best fit local conditions, and formally describe the targets in a financial policy and/or financial plan."

Working capital is also a crucial consideration in long-term financial planning, according to the GFOA. "Credit rating agencies consider the availability of working capital in their evaluations of continued creditworthiness."

The GFOA recommends that "under no circumstances should the target for working capital be less than forty-five (45) days' worth of annual operating expenses."

Finally, other reserve funds and financial resources were cited by the GFOA as important when considering a working capital reserve, including cash cycles, service

demand, control over rates and revenues, asset age and condition, volatility of expenses, separate reserve targets for capital needs, and debt position.

Properly designed reserve policies send a positive signal to ratepayers, investors, and regulatory and credit rating agencies that the MPWD is committed to maintaining its long-term fiscal strength. Strong and transparent financial policies, including maintaining prudent reserves for emergencies, rate stability, working capital, and capital improvements, are consistent with best practices in the utility industry and are important to the MPWD as they help to:

- Maintain the short-term and long-term financial health of the MPWD;
- Maintain stable rates for customers and help ensure manageable rate increases;
- Fund unanticipated cost contingencies;
- Ensure funds exist for system improvements;
- Ensure cash exists for the timely payment of expenses; and
- Act as a significant positive factor in credit ratings for debt issuances.

DISCUSSION

A DRAFT Cash Reserve Policy was introduced last month and discussed with the Board of Directors. Based on the input received during that discussion and further review and collaboration with the MPWD’s Municipal Finance Advisor (MFA) and the MPWD’s Financial Auditor, the DRAFT policy was refined into a second DRAFT, which is attached (in strikethrough format) for consideration.

As directed last month, the attached second DRAFT Cash Reserve Policy establishes two cash reserve funds:

1. Working Capital Reserve; and
2. Capital Reserve, including Emergency Reserve and Long-Term Capital Improvement Program (CIP) Reserve.

Ranking for funding of the reserves is recommended as follows:

RESERVE	FUNDING RANK	MAXIMUM TARGET LEVEL
Working Capital Reserve	1	\$1,500,000
Capital Emergency Reserve	2	\$1,000,000
Capital Long-Term CIP Reserve	3	\$3,000,000

WORKING CAPITAL RESERVE

Based on Board input last month and consultation with MPWD financial consultants, the recommended \$1.5 million, which is slightly above the GFOA standard of 45 days of annual operating expenses, is reasonable.

Staff ranks the Operating Contingency Reserve as the #1 priority for funding. It should be maintained at its full target level with only exigent circumstances that would warrant using these funds. The second DRAFT policy provides that the General Manager would

notify the Board President before advancing any of these reserves and ratify the action at the next regular Board meeting.

CAPITAL EMERGENCY RESERVE

The #2 priority ranked reserve includes \$1 million for the Capital Emergency Reserve Fund, which would be maintained at its target level. These funds would be used for infrastructure repair or replacement during emergencies. The MPWD’s existing reserve policy established \$2 million as a target level, and as reported last month staff believed that because of the MPWD’s higher risk pooled coverage limits that could be claimed during an emergency, the implementation of the MPWD 5-year CIP, the annual capital pay-go budget, the proposed target of \$1 million would be sufficient.

CAPITAL LONG-TERM CIP RESERVE

This fund was suggested by David Becker, the MPWD’s Financial Auditor, in order to provide for the MPWD’s long-term CIP that remains unfunded (\$32 million in 2015 dollars), and for any unexpected project cost increases within the current MPWD 5-Year CIP. Mr. Becker recommended \$3-\$5 million as a target level. Staff agreed with the concept and proposed \$3 million as a maximum target level. This provision for a source to balance any funding shortfalls within the 5-Year CIP as 2016 COP project funds are exhausted and address long-term capital needs would address concerns about successful completion of the MPWD’s CIP. This reserve fund is ranked at #3 and would be considered during annual capital budget planning.

Excess Reserves, Policy Administration, and Reporting

The second DRAFT Cash Reserve Policy includes guidelines for target levels and use of reserves, and the administration and reporting, including the Board’s flexibility to direct staff about utilization of reserves when they exceed target levels.

Besides much needed capital infrastructure and facility improvements, the MPWD has unfunded pension and OPEB (Other Post-Employment Benefits—retiree healthcare benefits) liabilities that are analyzed and reported in the MPWD annual financial audit reports. The MPWD is currently funding an annual contribution to its trust account for the OPEB liability (\$2.4 million), which is reported on monthly. To date, the OPEB liability is approximately one-third funded. Once fully funded, it is planned that all retiree healthcare benefit costs will be paid from the OPEB trust proceeds rather than from operations. The MPWD’s unfunded pension liability is \$1.5 million.

The policy is subject to biennial review and update by the MPWD, either as the result of material changes in risk exposures, best practices, regulations, or standards. All updates require approval by the Board.

Attachment: Second DRAFT MPWD Cash Reserve Policy

BOARD ACTION: APPROVED:_____ DENIED:_____ POSTPONED:_____ STAFF DIRECTION:_____

UNANIMOUS_____ STUEBING_____ WARDEN_____ VELLA_____ LINVILL_____ ZUCCA_____

CASH RESERVE POLICY

1. POLICY STATEMENT

Cash reserves are essential to ensuring fiscal responsibility, a key organizational goal of the Mid-Peninsula Water District (District). They can also provide the savings necessary to balance budgets during periods of fiscal constraint, allow for emergency preparedness, assist in maintaining stable water service rates, provide for a well-maintained infrastructure, and demonstrate a commitment to future system capital investments.

This Cash Reserve Policy is designed to establish guidelines to ensure the fiscal stability of the District and provide operating guidance for the management of District finances.

2. PURPOSE

Properly designed reserve policies send a positive signal to ratepayers, investors, and regulatory and credit rating agencies that the District is committed to maintaining the long-term fiscal strength of the District. Strong and transparent financial policies, including maintaining prudent reserves for emergencies, rate stability, working capital, and capital improvements, are consistent with best practices in the utility industry and are important to the District as they help to:

- Maintain the short-term and long-term financial health of the District;
- Maintain stable rates for customers and help ensure manageable rate increases;
- Fund unanticipated cost contingencies;
- Ensure funds exist for system improvements;
- Ensure cash exists for the timely payment of expenses; and
- Act as a significant positive factor in credit ratings for debt issuances.

The District will maintain cash reserves in two (2) categories:

1. Operating Working Capital Reserve (~~including Operating Contingency Reserve and Rate Stabilization Reserve~~); and
2. Capital Reserve (including ~~Capital Improvements/Outlay Pay-Go Reserve~~, Emergency Reserve, and Long-Term CIP Debt Service Reserve).

MID-PENINSULA WATER DISTRICT CASH RESERVE POLICY SUMMARY

RESERVE	FUNDING RANK	MAXIMUM TARGET LEVEL
Operating Contingency-Working Capital Reserve	1	\$1,500,000
Capital Emergency Reserve	2	\$1,000,000
Capital Improvements/Outlay Pay-Go Reserve <u>Long-Term CIP Reserve</u>	3	\$13,000,000
Operating Rate Stabilization Reserve	4	\$-500,000
Capital Debt Service Reserve	5	\$1,000,000

3. OPERATING WORKING CAPITAL RESERVE

The purpose of the Operating Working Capital Reserve is to ensure that the District will at all times have sufficient funding available to meet annual operating costs. Adequate operating reserves, along with sound financial policies, result from prudent fiscal stewardship and provide financial flexibility in the event of unanticipated expenditures or revenue fluctuations.

3.1 OPERATING CONTINGENCY WORKING CAPITAL RESERVE

The Operating Contingency Working Capital Reserve is established to cover temporary cash flow deficiencies that occur as a result of timing differences between the receipt of operating revenue and expenditure requirements and unexpected costs that might occur as a result of doing business.

- A. Target Level: \$1.5 million.
- B. Use of Reserve: May be utilized as needed to pay outstanding operating expenditures prior to the receipt of anticipated operating revenues, or in circumstances resulting from short-term loss or shortage of revenues. The General Manager will notify the Board President prior to withdrawing and using the necessary funds, and seek ratification of the expenditure at the next regular Board Meeting.

~~3.2 — RATE STABILIZATION RESERVE~~

~~The Rate Stabilization Reserve is established to mitigate rate shock due to temporary and transitional regulatory changes, loss of a major resource, sharp demand reduction or market volatility.~~

- A. ~~Target Level: \$500,000.~~
- B. ~~Use of Reserve: May be used to cover unexpected decreases in operating revenues and increases in operating costs to reduce year-over-year volatility in needed rate increases, as approved the Board of Directors. The reserve fund balance will be evaluated for replenishment during fiscal year budget planning, and dependent upon available operating revenues.~~

4. CAPITAL RESERVE

The purpose of the Capital Reserve is to ensure that the District is able to fund the repair, maintenance, or replacement of the water system's infrastructure assets, during normal operations and emergencies. Adequate capital reserves, along with sound financial policies, provide for the District's commitment to long-term capital planning and implementation, and allow for financial flexibility to fund projects, especially during emergencies.

~~4.1 CAPITAL IMPROVEMENTS/OUTLAY PAY-GO RESERVE~~

~~The Capital Improvements/Outlay Pay Go Reserve is established for revenue funded (pay-go) capital infrastructure projects and outlay items (e.g., vehicles, computers, servers, and related~~

~~automation, AMI (Automated Metering Infrastructure change-out program) as planned in the District's annual capital budget.~~

- A. ~~Target Level: \$1.5 million~~
- B. ~~Use of Reserve: This fund will be drawn down each year as capital expenditures are made. During fiscal year budget planning, the reserve fund balance will be evaluated for replenishment based on the upcoming year's revenue-funded capital requirements.~~

4.21 ~~————~~ CAPITAL EMERGENCY RESERVE

The Capital Emergency Reserve is established to provide protection recovery to the District and its customers for losses arising from a disaster or any other unexpected loss as a result of conducting District business. The reserve level combined with the District's managed risk pooled insurance coverage should adequately protect the District and its customers in the event of a catastrophic loss.

- A. Target Level: \$1.0 million.
- B. Use of Reserve: May be used to cover unexpected losses experienced by the District as a result of a disaster or emergency incidents that might result in the normal course of doing business. Any reimbursement received by the District from insurance as a result of a submitted claim shall be deposited back into the reserve as replenishment for the loss. The General Manager will notify the Board President prior to withdrawing and using the necessary funds, and seek ratification of the expenditure at the next regular Board Meeting.

4.32 ~~————~~ DEBT SERVICE CAPITAL LONG-TERM CIP RESERVE

The purpose of the ~~Debt Service~~ Capital Long-Term CIP Reserve is to ensure the District's ability to provide for unexpected increases in CIP project costs or a portion of its unfunded long-term CIP. ~~make its annual debt service payment for the 2016 COP (Certificates of Participation) capital debt financing project in an extreme event that might impact or impair the District's ability to provide services, thus impacting revenues at a time critical infrastructure repairs or system replacement are needed to restore operations, or in extreme market disruptions. The District is not contractually obligated to maintain this reserve.~~

- A. Target Level: ~~\$~~13.0 million
- B. Use of Reserve: May be ~~used~~ utilized to cover unexpected increases in capital project costs within the District's 5-Year CIP after 2016 COP project funds were exhausted, or to provide for a portion of the unfunded long-term CIP (\$32 million in 2015 dollars). Use of this reserve would require advance approval of the Board of Directors. ~~in the event the District is otherwise unable to pay its debt service obligations. It is not anticipated that the District would ever utilize these reserves absent a significant disaster or extreme market disruption, and only with the approval of the Board of Directors. The Board of~~

~~Directors has the authority to redirect the use of these reserves as the needs of the District change.~~

5.0 OVERSIGHT AND REPORTING

Reserve levels will be monitored by staff during the fiscal year and reported to the Board of Directors in monthly financial reports.

To the extent that reserves exceed target levels, the Board of Directors has the flexibility to direct staff to utilize the available funds to:

- A. Pay for capital projects (reducing the need for future debt);
- B. Pay down unfunded liabilities such as pension obligations and other post-employment benefits (OPEB)—retiree healthcare obligations;
- C. Pay down existing debt;
- D. Establish a prepayment reserve to pay off outstanding long-term debt;
- E. Reduce water rates; and/or
- F. Fund other strategic objectives.

This Cash Reserve Policy will be reviewed on a biennial basis to ensure conformance with the District's strategic goals and objectives, and updated as necessary in compliance with material changes in risk exposures, regulations, or standards.



TO: Board of Directors
FROM: Tammy A. Rudock
General Manager
DATE: November 15, 2017

MANAGER'S REPORT

FOLLOW-UP FROM 10/26/17 REGULAR BOARD MEETING

- Updated the 2016 COP quarterly project fund report graph.
- Revisions to MPWD Personnel Manual dated October 26, 2017, were finalized and replacement pages are scheduled to be distributed within the next couple of weeks.
- 2018 Board meeting schedule posted to MPWD website.

WATER CONSERVATION PROGRESS – SUMMARY REPORT



The report due November 15th to the SWRCB was timely submitted. October's total water consumption was 120,865 units. The reduction measured -1.0% (compared to October 2013's 122,117 units).



Last month's R-GPCD was 97.5 (as compared to October 2013 R-GPCD of 96.2). There were calculation formula differences between these two years, including residential percentage and population.



For FY 2017/2018 the cumulative water reduction equals 12.6% (compared to 2013).



There were no water waste complaints last month. The total number of water waste complaints for FY 2017/2018 is zero (July 1, 2017 through October 31, 2017).

Governor Brown lifted the drought emergency water conservation regulations but retained the water waste prohibitions and urban water supplier reporting requirements. Executive Order B-40-17 lifted the drought emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne, where there are diminished groundwater supplies. Continued prohibitions on wasteful practices include watering during or after rainfall, hosing off sidewalks, and irrigating turn on public street medians.

The framework for the plan to make conservation a way of life in California requires new state legislation to establish long-term water use efficiency measures and improved planning for more frequent and severe droughts.

HOLIDAY CLOSURE

The MPWD Administration, Customer Services, and Field Operations will be closed on Thursday and Friday, November 23-24, 2017, in observance of the Thanksgiving holiday.

On-call staff will be available for service interruptions and emergencies. Customers may contact the MPWD's 24-hour answering service at 650-591-8941.

3-MONTH "LOOK AHEAD" FOR BOARD MEETINGS

DECEMBER 21, 2017 (3rd Thursday)

- Election of Officers (followed by reception).
- Consider Joint Agreement between the MPWD and City of Belmont for 2017 MPWD Capital Project known as the Francis, Academy, and Davey Glen Water Main Replacement Project.
- Consider/Approve Debt Management Policy.
- Consider/Approve Cash Reserve Policy.
- Receive BAWSCA report.

JANUARY 25, 2018

- Receive Reconciliation Quarterly Report on 2016 COP Capital Debt Financing for period October 1, 2017 through December 31, 2017, and 2016 COP Project Fund Quarterly Report.
- Receive annual financial audit report for FYE June 30, 2017. Post to website.
- Receive structural engineering report on MPWD Dairy Lane facilities.
- Annual water awareness calendar contest award presentations.
- Closed Session: Complete General Manager annual performance evaluation.

FEBRUARY 22, 2018

- Receive mid-year review of current fiscal year Operating and Capital Budgets and consider/approve Amended Budgets (as needed).
- Review proposed updated MPWD Miscellaneous Fees.

UPCOMING MEETINGS/EVENTS

BAWSCA Water Management Meeting (Foster City): December 7, 2017

HIA Meeting (Belmont): December 7, 2017

ACWA JPIA 2017 Fall Conference & Exhibition (Anaheim): November 27, 2017-December 1, 2017

ACWA JPIA 2018 Spring Conference & Exhibition (Sacramento): May 7-11, 2018



TO: Board of Directors

FROM: Candy Pina

DATE: November 15, 2017

ADMINISTRATIVE SERVICES MANAGER'S REPORT

FINANCIAL REPORTING:

1) **Schedule of Cash and Investments:**

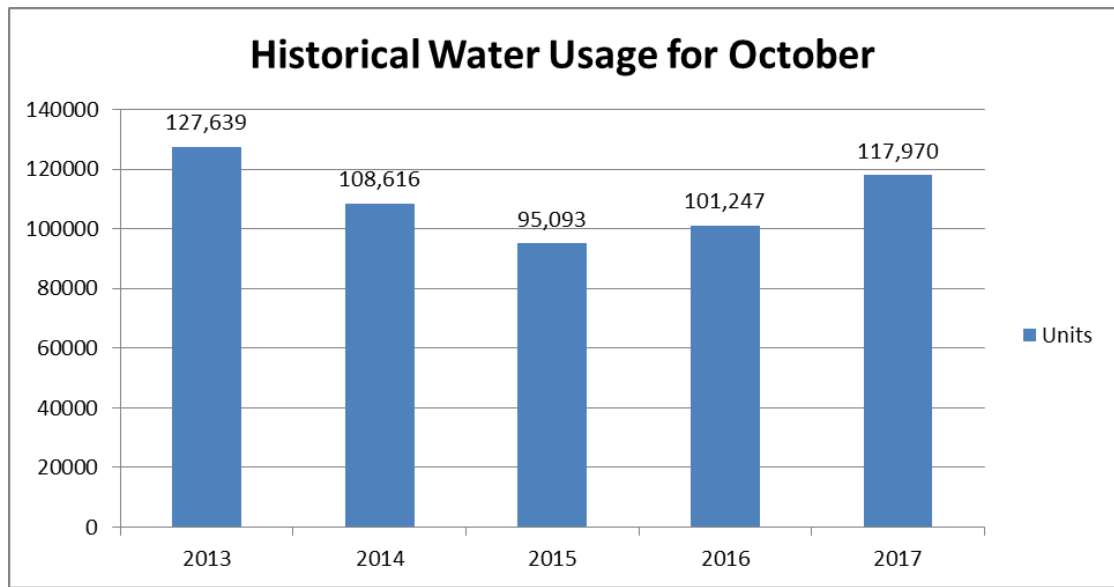
SCHEDULE OF CASH AND INVESTMENTS		
CASH ACCOUNT	BALANCE @ 10/31/17	BALANCE @ 11/08/17
PETTY CASH	\$400	\$400
CASH DRAWER	\$200	\$200
WELLS FARGO CHECKING	\$202,196	\$262,640
LAIF	\$5,704,854	\$5,704,854
BNY MELLON SWEEP ACCOUNT	\$700,099	\$700,099
TOTAL	\$6,607,749	\$6,668,193

Month End Balance of PARS/OPEB for September 2017 (October 2017 report not available): \$8749,082.02. Contributions of \$41,100.67 and Net Earnings of \$4,287.22 reported.

MPWD RESERVE FUNDS				
Reserve Account	Balance @ 10/31/2015	Balance @ 10/31/2016	Balance @ 10/31/2017	Budget for Reserve Policy
Capital Reserves	\$ 886,728	\$ 1,555,161	\$ 3,204,854	\$ 2,500,000
Emergency Reserves	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000
Working Capital Reserves	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
TOTAL RESERVE FUNDS	\$ 3,386,728	\$ 4,055,161	\$ 5,704,854	\$ 5,000,000

Water Revenue Report:

WATER REVENUES for FISCAL YEAR 2017/2018					
Month	Total Units	Water Commodity Charges	Fixed System Charges	Total Water Revenues	Misc Rev
JUL	117,761	991,424.67	221,479.51	1,212,904.18	1,263.43
AUG	124,029	1,058,492.93	221,538.81	1,280,031.74	1,262.50
SEP	127,050	1,086,959.69	221,731.22	1,308,690.91	1,262.50
OCT	117,970	969,366.58	220,229.28	1,189,595.86	1,270.47
TOTAL	486,810	4,106,243.87	884,978.82	4,991,222.69	5,058.90



CONFERENCES, TRAINING, & MEETINGS:

- 1) Jeanette Kalabolas: 11/09/17 – Bay Area Water Conservation Committee’s (Norcal) Quarterly Meeting
- 2) Candy Pina: 11/09/17 – Leadership Essentials Training
- 3) Candy Pina: 11/13/17 – Meeting with Auditors
- 4) Candy Pina: 11/15/17 – Ad-hoc Reporting tools with Springbrook
- 5) Jeanette Kalabolas/Laura Ravella: 11/17/17 – MPWD field trip with students from SCCLC

TEAM BUILDING ACTIVITIES:

General Manager Rib Eye Luncheon and Gift Exchange will take place on Tuesday, November 14th.

We continue to celebrate birthdays.



TO: Board of Directors
FROM: Rene A. Ramirez, Operations Manager
DATE: November 15, 2017

OPERATIONS REPORT – OCTOBER

Projects:

- We have just one meter in Zone 1 to replace and are waiting for the dust to settle regarding the lawsuit before we replace this meter. In the meantime, their water is still metered;
- Held a design review meeting on the Hillcrest Pressure Reducing Station with the District Engineer who is responsible for its design;
- Attended a construction progress meeting with Stoloski and Gonzalez along with District Engineer and District staff;
- During October we were unable to install any meters. The total since June 2nd remains at 455 AMI meters, or about 25% of Zone 2; and
- Constructed new 1-1/2 inch water services for 1128 Pullman Avenue.

Maintenance:

- Responded to and completed 285 USA (underground service alerts) requests and identified infrastructure before digging in the streets or easements. Last month we marked 269 locations;
- Read meters in zones without AMI;
- Replaced a corroded and leaking water service at 120 Clipper Avenue with a coated copper service line;
- Repaired a main break at 3401 Beresford Avenue on a CIP main. We will need to go back to repair street;
- Repaired a main break at 1202 North Road on a CIP main. We had a bit of clean up on a couple of properties and had at least one claim filed. We will need to go back to repair street;
- Replaced a leaking polybutylene (plastic) water service with a copper tubing service at 2513 Lincoln Avenue, which turned out to be one service split into two services. Staff installed two separate services for our customers;
- Performed routine maintenance to system regulators;
- Collected a requisite 44 water samples for bacteriological testing – all samples were normal and showed no signs of coliform bacteria;
- Continue to routinely monitor water system dead-ends continued for disinfectant residual; and

- Monitoring for signs of nitrification within our tanks, sample stations and dead ends continues as a part of regular water quality monitoring.

System Repairs:

Date	Location	Event	Material	Installation Date	Estimated Water Loss (Gals.)
10/14	120 Clipper	Service Leak	PVC	1958	<1,000
10/16	3401 Beresford	Main Break	CIP	1956	Unknown
10/20	1202 North Rd	Main Break	CIP	1950	80,400
10/30	2513 Lincoln	Service Leak	CIP	1958	Unknown

Development:

Staff is currently working with developers on 31 development projects:

Mixed Use Commercial/Residential:

- o 576-600 El Camino Real – Fees paid, awaiting scheduling; and
- o 400-490 El Camino Real – All 4 connections to our main have been completed. Backflow assemblies are installed and tested. Two new hydrants are on-line. Awaiting request for meter installations

Commercial:

- o 539 Harbor Blvd. – updated installation quote;
- o 700 Island Parkway – water and fire service installed. Inspection of fire backflow assembly complete. Awaiting irrigation and domestic backflow installation;
- o 1201 Shoreway Road – Fee schedule provided to developer;
- o 1477 El Camino Real – currently reviewing their plans;
- o 699 Ralston Ave – Fees paid, awaiting schedule for installation;
- o Belmont Ave Parcel APN's – (2) awaiting plans; and
- o 1500 Ralston – currently reviewing plans.

Residential/Multi-Family:

- o 1829 Oak Knoll - currently reviewing their plans;
- o 1600 Prospect - currently reviewing their plans;
- o 10 Notre Dame Place - currently reviewing their plans;
- o 2603 Cipriani - currently reviewing their plans;
- o 2828 Hallmark - Fees paid, awaiting schedule for installation;
- o 2827 Wemberly - currently reviewing their plans;
- o 10 Notre Dame Place - currently reviewing their plans;
- o 1906 Bishop – completed;
- o 1919 Oak Knoll Dr. – currently reviewing their plans;

- 1942 Bayview – currently reviewing their plans;
- 2515 Carlmont Dr - currently reviewing their plans;
- 1105 Tahoe, requesting fire flow;
- 300 Hiller St - currently reviewing their plans;
- 796 Miramar Terrace - currently reviewing their plans;
- Bishop Road development - currently reviewing their plans;
- 1320 Talbryn Lane development- currently reviewing their plans;
- 2712 Comstock – currently reviewing their plans;
- 2689 Comstock – Fee schedule provided to resident;
- 2128 Pullman Ave - Fees paid, awaiting schedule for installation;
- 909 Ruth - Fees paid, awaiting schedule for installation;
- 2227 Thurm Ave – Fees paid, awaiting schedule for installation; and
- 2221 Thurm Ave – Fees paid, awaiting schedule for installation.

Administration:

- Attended the monthly BAWSCA manager’s meeting on behalf of the General Manager;
- Attended the Pakpour Consulting Group’s 4th quarter General Manager’s luncheon held near the Westborough Water District office;
- Participated in office training regarding updates to the District’s website and how to announce notices to our customers;
- Participated in a meeting with Dan Bergmann to go over and discuss the CIP’s 3rd quarter financial review;
- Met with City of Belmont Public Works staff to continue discussion on the fair sharing of costs for the joint sewer/water project;
- A couple members of the Ops staff attended the SFPUC Wholesale Customer meeting in Millbrae;
- Had a good time and good food during a Chili Cook-off;
- Staffing levels returning to normal in November;
- Continue to actively managing five (5) engineering design contracts related to the CIP; and
- Continued to actively manage power use during pumping operations.

**MID-PENINSULA WATER DISTRICT
BUDGET FOR YEAR 2016-2017
SUMMARY**

DESCRIPTION	APPROVED FY 2017-2018 BUDGET \$	ACTUALS 7/1/2017 10/31/2017	REMAINING BALANCE/ (OVER BUDGET)	Target YTD % 33.7%
				Y-T-D % OF BUDGET
OPERATING REVENUE				
WATER COMMODITY CHARGES	8,500,000	4,106,244	4,393,756	48.3%
FIXED SYSTEM CHARGES	2,663,720	884,979	1,778,741	33.2%
FIRE SERVICE CHARGES	14,000	5,059	8,941	36.1%
SERVICE LINE & INSTALLATION CHARGES	10,000	-	10,000	NA
WATER SYSTEM CAPACITY CHARGES	200,000	243,117	(43,117)	121.6%
WATER DEMAND OFFSET CHARGES	10,000	30,523	(20,523)	305.2%
MISCELLANEOUS CHARGES	10,000	65,271	(55,271)	652.7%
INTEREST REVENUE - LAIF	10,000	21,461	(11,461)	214.6%
LEASE OF PHYSICAL PROPERTY	150,000	51,353	98,647	34.2%
PROPERTY TAX REVENUE	260,000	12,009	247,991	4.6%
TOTAL OPERATING REVENUE	11,827,720	5,420,015	6,407,705	45.8%
OPERATING EXPENDITURES (OP EXP)				
SALARIES & WAGES	1,718,225	456,245	1,261,980	26.6%
PAYROLL TAXES & BENEFITS	1,204,893	358,304	846,589	29.7%
PURCHASED WATER	5,234,856	2,303,920	2,930,936	44.0%
OUTREACH & EDUCATION	116,900	8,645	108,256	7.4%
M&R - OPS SYSTEM	389,598	96,805	292,793	24.8%
M&R - FACILITIES & EQUIPMENT	166,860	42,147	124,713	25.3%
MAJOR MAINTENANCE	30,000	-	30,000	NA
OFFICE SUPPLIES & EQUIPMENT	314,755	90,284	224,471	28.7%
MEMBERSHIP & GOV FEES	208,613	63,523	145,090	30.5%
BAD DEBT & CLAIMS	37,000	(4,431)	41,431	-12.0%
UTILITIES	301,687	84,018	217,669	27.8%
PROFESSIONAL SERVICES	458,660	101,913	356,747	22.2%
TRAINING/TRAVEL & RECRUITMENT	45,000	10,706	34,294	23.8%
RESTRICTED EARNINGS	10,000	21,461	(11,461)	214.6%
RESERVES	-	-	-	NA
DEBT SERVICE 2016 COPs	1,045,865	232,581	813,285	22.2%
TOTAL OP EXP LESS DEPRECIATION (DEPREC)	11,282,912	3,866,120	7,416,792	34.3%
TOTAL OP REVENUE LESS OP EXP & DEPREC	544,808	1,553,895	(1,009,087)	285.2%
DEPRECIATION	1,050,000	278,189	771,811	26.5%
TOTAL OP REVENUE LESS OP EXP	(505,192)	1,275,705	(1,780,897)	-252.5%
NET TRANSFERS TO CAPITAL	505,192	(1,275,705)	1,780,897	-252.5%
NET RESULTS OF OPERATIONS	-	-	-	

**MID-PENINSULA WATER DISTRICT
OPERATIONS BUDGET FOR YEAR 2016-2017
DETAILED**

Target YTD % 33.7%

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	FY 2017-2018 BUDGET \$	ACTUAL 7/1/2017 10/31/2017	REMAINING BALANCE/ (OVER BUDGET)	Y-T-D % OF BUDGET
4010	WATER COMMODITY CHARGES (A)	8,500,000	4,106,243.87	4,393,756	48.3%
4020	FIXED SYSTEM CHARGES	2,663,720	884,978.82	1,778,741	33.2%
4030	FIRE SERVICE CHARGES	14,000	5,058.90	8,941	36.1%
4050	SERVICE LINE & INSTALLATION CHARGES	10,000	-	10,000	NA
4060	WATER SYSTEM CAPACITY CHARGES (B)	200,000	243,117	(43,117)	121.6%
4070	WATER DEMAND OFFSET CHARGES (B)	10,000	30,523	(20,523)	305.2%
4090	MISCELLANEOUS REVENUES (C)	<u>10,000</u>	<u>65,271</u>	<u>(55,271)</u>	652.7%
4000	TOTAL WATER AND FEE CHARGES	<u>11,407,720</u>	<u>5,335,192</u>	<u>6,072,528</u>	46.8%
4102	Interest Revenue- LAIF (D)	<u>10,000</u>	<u>21,461</u>	<u>(11,461)</u>	214.6%
4100	INTEREST REVENUE	<u>10,000</u>	<u>21,461</u>	<u>(11,461)</u>	214.6%
4201	Lease of Physical Property	150,000	51,353	98,647	34.2%
4202	Property Tax Revenue (E)	260,000	12,009	247,991	4.6%
4208	Landscape Plan Permit Review	-	-	-	NA
4200	OTHER REVENUE	<u>410,000</u>	<u>63,362</u>	<u>346,638</u>	15.5%
4000	TOTAL OPERATING REVENUE	<u>11,827,720</u>	<u>5,420,015</u>	<u>6,407,705</u>	45.8%
6011	Salaries & Wages	1,622,250	439,153	1,183,097	30.3%
6012	Director Compensation	11,000	2,400	8,600	21.8%
6017	Capital Salaries & Wages	-	75,605	(75,605)	NA
6010	GROSS REGULAR WAGES	<u>1,633,250</u>	<u>517,158</u>	<u>1,116,092</u>	31.7%
6017	CAPITAL SALARY & WAGES reversed	-	(75,605)	75,605	
6021	Overtime Labor	46,865	5,251	41,614	11.2%
6022	Standby Labor	<u>38,110</u>	<u>9,441</u>	<u>28,669</u>	24.8%
6020	SUB-TOTAL SALARY & WAGES	<u>1,718,225</u>	<u>456,245</u>	<u>1,261,980</u>	26.6%
6031	FICA/Medicare PR Tax	135,445	37,015	98,430	27.3%
6038	ACWA Health Care	329,600	116,426	213,174	35.3%
6039	ACWA Dental	31,930	8,775	23,155	27.5%
6040	ACWA Vision	4,481	1,522	2,959	34.0%
6041	ACWA Life/AD&D	4,326	1,204	3,122	27.8%
6042	Standard LDL/SDL Disability	12,772	2,853	9,919	22.3%
6043	Workers' Comp Insurance	50,400	10,882	39,518	21.6%
6044	Unemployment	1,030	-	1,030	NA
6045	CALPERS Retirement - ER 2%@55	242,050	82,276	159,774	34.0%
6054	CAPITAL PAYROLL TAXES & BENEFITS	252 -	753	(753)	N/A

**MID-PENINSULA WATER DISTRICT
OPERATIONS BUDGET FOR YEAR 2016-2017
DETAILED**

Target YTD % 33.7%

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	FY 2017-2018 BUDGET \$	ACTUAL 7/1/2017 10/31/2017	REMAINING BALANCE/ (OVER BUDGET)	Y-T-D % OF BUDGET
6046	Retirees' ACWA Health Care	57,680	21,046	36,634	36.5%
6047	Directors' ACWA Health Care	111,240	38,766	72,474	34.8%
6049	Medical Reimbursement	1,030	137	893	13.3%
6050	Employee Service Recognition	10,000	2,469	7,531	24.7%
6051	Safety Incentive Program	7,416	2,314	5,102	31.2%
6052	Uniforms (F)	25,493	11,315	14,178	44.4%
6053	PARS OPEB Expense	180,000	21,303	158,697	11.8%
6030	SUB-TOTAL PAYROLL TAXES & BENEFITS	1,204,893	359,057	845,836	29.8%
6054	CAPITAL PAYROLL TAXES & BENEFITS	-	(753)	753	N/A
6000	PERSONNEL COSTS	2,923,118	814,549	2,108,569	27.9%
6101	SFPUC Treated Water (A)	4,700,000	2,114,792	2,585,208	45.0%
6102	BAWSCA (Debt Service Surcharges)	476,000	163,040	312,960	34.3%
6103	Rates Stabilization	58,856	-	58,856	NA
6104	SFPUC Water Service Charge	-	26,088	(26,088)	N/A
6100	PURCHASED WATER	5,234,856	2,303,920	2,930,936	44.0%
6301	Water Conservation Program	7,200	1,652	5,548	22.9%
6302	School Conservation Program	7,200	2,800	4,400	38.9%
6303	Public Outreach & Education	25,750	1,812	23,938	7.0%
6305	HET Rebates	19,750	1,007	18,743	5.1%
6306	Washing Machine Rebates	13,750	-	13,750	NA
6307	Lawn-Be-Gone Rebates	38,100	1,345	36,755	3.5%
6308	Rain Barrel Rebates	5,150	29	5,121	0.6%
6304	TOTAL WATER CONSERVATION REBATES	76,750	2,381	74,369	3.1%
6300	OUTREACH/EDUCATION	116,900	8,645	108,256	7.4%
6401	Water Quality	69,010	6,763	62,247	9.8%
6402	Pumping	65,148	1,731	63,417	2.7%
6403	Storage Tanks	10,300	-	10,300	NA
6404	Mains/Distribution	103,000	38,735	64,265	37.6%
6405	Meters & Service	30,900	9,798	21,102	31.7%
6406	Fire Hydrants (G)	31,930	31,972	(42)	100.1%
6407	Regulator Stations	6,180	550	5,630	8.9%
6408	Safety	32,960	1,142	31,818	3.5%
6409	SCADA Maintenance	15,450	4,942	10,508	32.0%
6410	Generator Maintenance	24,720	1,172	23,548	4.7%
6400	M&R - OPS SYSTEMS	389,598	96,805	292,793	24.8%
6501	M&R-Buildings&Grounds	95,790	32,158	63,632	33.6%
6502	M&R- Equipment&Tools (H)	21,630	(703)	22,333	-3.2%
6503	M&R- Vehicles & Large Equipment	19,570	5,355	14,215	27.4%
6504	M&R - Fuel	29,870	5,337	24,533	17.9%
6500	M&R - FACILITIES & EQUIPMENT	166,860	42,147	124,713	25.3%
6601	Cathodic Protection Survey	-	-	-	NA

**MID-PENINSULA WATER DISTRICT
OPERATIONS BUDGET FOR YEAR 2016-2017
DETAILED**

Target YTD % 33.7%

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	FY 2017-2018 BUDGET \$	ACTUAL 7/1/2017 10/31/2017	REMAINING BALANCE/ (OVER BUDGET)	Y-T-D % OF BUDGET
6602	Leak Detection Survey	30,000	-	30,000	NA
6600	MAJOR MAINTENANCE	30,000	-	30,000	NA
6701	Office Supplies	15,450	2,806	12,644	18.2%
6702	Insurance- Liability/Vehicles	90,381	23,491	66,890	26.0%
6703	Postage	8,240	1,248	6,992	15.1%
6704	Printing/Printing Supplies	15,450	2,003	13,447	13.0%
6705	Equipment Services/Maintenance	58,453	2,777	55,676	4.8%
6706	Computer Supplies & Upgrades (I)	15,193	14,100	1,093	92.8%
6707	Security & Safety	11,073	697	10,376	6.3%
6708	Other Fees	515	-	515	NA
6709	Customer Credit Card Svs Fees (J)	100,000	43,163	56,837	43.2%
6700	OFFICE SUPPLIES & EQUIP	314,755	90,284	224,471	28.7%
6801	Dues & Publications	40,685	9,949	30,736	24.5%
6802	Gov't Fees & Licenses	54,848	5,247	49,601	9.6%
6803	BAWSCA Membership Assessments	76,000	24,201	51,799	31.8%
6804	Env Health - Cross Connection Inspection	31,930	10,900	21,030	34.1%
6805	Software License (K)	5,150	13,226	(8,076)	256.8%
6800	MEMBERSHIP & GOV FEES	208,613	63,523	145,090	30.5%
6901	Bad Debt	7,000	(904)	7,904	-12.9%
6902	Claims	30,000	(3,527)	33,527	-11.8%
6900	BAD DEBT & CLAIMS	37,000	(4,431)	41,431	-12.0%
7001	Utilities-Internet/Cable	12,462	2,498	9,964	20.0%
7002	Utilities-Cellular Telephones	12,206	3,907	8,299	32.0%
7003	Utilities-Electric-Pumping	226,600	59,139	167,461	26.1%
7004	Utilities-Electric-Bldgs&Grounds	24,720	8,750	15,970	35.4%
7005	Utilities-Telephones (L)	18,025	7,636	10,389	42.4%
7006	Utilities-Sewer - NPDES	7,674	2,090	5,584	27.2%
7000	UTILITIES	301,687	84,018	217,669	27.8%
7101	Prof Serv - District Counsel	90,000	17,847	72,154	19.8%
7102	Prof Serv - District Engineer	80,000	10,457	69,543	13.1%
7103	Prof Serv - IT	19,750	3,520	16,230	17.8%
7104	Prof Serv- Annual Finance Audit (M)	19,000	12,750	6,250	67.1%
7105	Prof Serv - Mngmt Consult	-	-	-	NA
7106	Prof Serv- Accounting & Payroll	21,750	7,650	14,100	35.2%
7107	Prof Serv- Customer Billing	72,250	22,054	50,196	30.5%
7109	Prof Serv - Answering Svs	5,000	1,124	3,876	22.5%
7110	Prof Serv - Miscellaneous	147,210	25,911	121,299	17.6%
7111	Prof Serv - District Treasurer	3,700	600	3,100	16.2%
7100	PROFESSIONAL SERVICES	458,660	101,913	356,747	22.2%
7201	Director Travel	254 5,000	1,398	3,602	28.0%
7202	Director Expense	1,000	-	1,000	NA

**MID-PENINSULA WATER DISTRICT
OPERATIONS BUDGET FOR YEAR 2016-2017
DETAILED**

Target YTD % 33.7%

ACCOUNT NUMBER	ACCOUNT DESCRIPTION	FY 2017-2018 BUDGET \$	ACTUAL 7/1/2017 10/31/2017	REMAINING BALANCE/ (OVER BUDGET)	Y-T-D % OF BUDGET
7203	Elections	-	-	-	NA
7204	Employee Travel/Training	32,000	8,399	23,601	26.2%
7205	Meetings Expense	7,000	909	6,091	13.0%
7200	TRAINING & TRAVEL	45,000	10,706	34,294	23.8%
7302	Restricted Earnings Expense - Interest LAIF (D)	10,000	21,461	(11,461)	214.6%
7300	RESTRICTED EARNINGS EXPENSE	10,000	21,461	(11,461)	214.6%
8001	Working Reserves: Capital	-	-	-	NA
8002	Working Reserves: Operating	-	-	-	NA
8000	RESERVES	-	-	-	NA
9010	DEPRECIATION	1,050,000	278,189	771,811	26.5%
9011	DEBT SERVICE 2016 COPs	1,045,865	232,581	813,285	22.2%
SUB-TOTAL - OPERATING EXPENSES		9,409,794	3,329,761	6,080,033	35.4%
TOTAL OPERATING EXPENSES		12,332,912	4,144,310	8,188,602	33.6%
NET OPERATING SURPLUS/(LOSS) TRANSFER TO CAPITAL		(505,192)	1,275,705	(1,780,897)	-252.5%

- (A) Water revenues are at 48.3% and water purchases are at 45.0%.
- (B) Six (6) meter upgrades and new services; closed and revenue recognized accordingly.
- (C) Vehicle expenses related to nine (9) AMI Meter Upgrade projects generate revenue totaling \$46,605.
- (D) Increased reserves generating more interest revenue.
- (E) Receive property tax revenue in Dec 2017 and April 2018.
- (F) Staff work boots totaling \$3,540.
- (G) Purchase of hydrants totaling \$31,694.
- (H) Recognized small tools with Meter Installation and upgrade projects, so reduced expense (moved to FA), totaling \$3,769.
- (I) Battery Back Up and replacement printer purchased totaling \$3,040.
- (J) Water Revenues are at 36.9% compared to target of 25.2%; therefore, credit card fees higher than target.
- (K) Accela (Springbrook) software license \$2619/month. Need to adjust this at mid-year budget review.
- (L) Scada phone lines totaling \$2,605 for Sept/Oct.
- (M) Financial Audit first payment for field work completed.

**MID-PENINSULA WATER DISTRICT
STATEMENT OF REVENUES & EXPENSES
PREVIOUS YEAR COMPARISON**

	Jul 17 -Oct 17	Jul 16 - Oct 16	\$ Change	% Change
Ordinary Income/Expense				
Income				
4000 · OPERATING REVENUE	5,335,192.24	4,505,913.84	829,278.40	18.4%
4100 · INTEREST INCOME	73,455.89	217.35	73,238.54	33,696.13%
4200 · OTHER INCOME	63,362.13	57,988.58	5,373.55	9.27%
Total Income	<u>5,472,010.26</u>	<u>4,564,119.77</u>	<u>907,890.49</u>	<u>19.89%</u>
Expense				
6000 · PERSONNEL COSTS	814,549.04	876,431.03	-61,881.99	-7.06%
6100 · PURCHASED WATER	2,303,920.30	2,120,460.13	183,460.17	8.65%
6300 · OUTREACH/EDUCATION	8,644.50	19,296.88	-10,652.38	-55.2%
6400 · M&R - OPS SYSTEMS	96,804.93	94,627.18	2,177.75	2.3%
6500 · M&R - FACILITIES & EQUIPMENT	42,147.10	41,347.69	799.41	1.93%
6600 · MAJOR MAINTENANCE	0.00	350.00	-350.00	-100.0%
6700 · OFFICE SUPPLIES & EQUIPMENT	90,284.47	89,342.96	941.51	1.05%
6800 · MEMBERSHIP & GOV FEES	63,523.10	50,873.48	12,649.62	24.87%
6900 · BAD DEBT & CLAIMS	-4,431.46	3,813.70	-8,245.16	-216.2%
7000 · UTILITIES	84,018.08	67,478.58	16,539.50	24.51%
7100 · PROFESSIONAL SERVICES	101,912.78	116,264.11	-14,351.33	-12.34%
7200 · TRAINING & TRAVEL	10,706.21	10,167.27	538.94	5.3%
Total Expense	<u>3,612,079.05</u>	<u>3,490,453.01</u>	<u>121,626.04</u>	<u>3.49%</u>
Net Ordinary Income	<u>1,859,931.21</u>	<u>1,073,666.76</u>	<u>786,264.45</u>	<u>73.23%</u>
Other Income/Expense				
Other Expense				
9000 · DEPRECIATION	278,189.47	326,008.38	-47,818.91	-14.67%
COP Financing Costs	232,580.50	0.00	232,580.50	100.0%
Total Other Expense	<u>510,769.97</u>	<u>326,008.38</u>	<u>184,761.59</u>	<u>56.7%</u>
Net Revenue/(Expenses)	<u>1,349,161.24</u>	<u>747,658.38</u>	<u>601,502.86</u>	<u>80.5%</u>

RECONCILIATION TO OPERATING BUDGET

Adjustments to Increase Net Operating Surplus

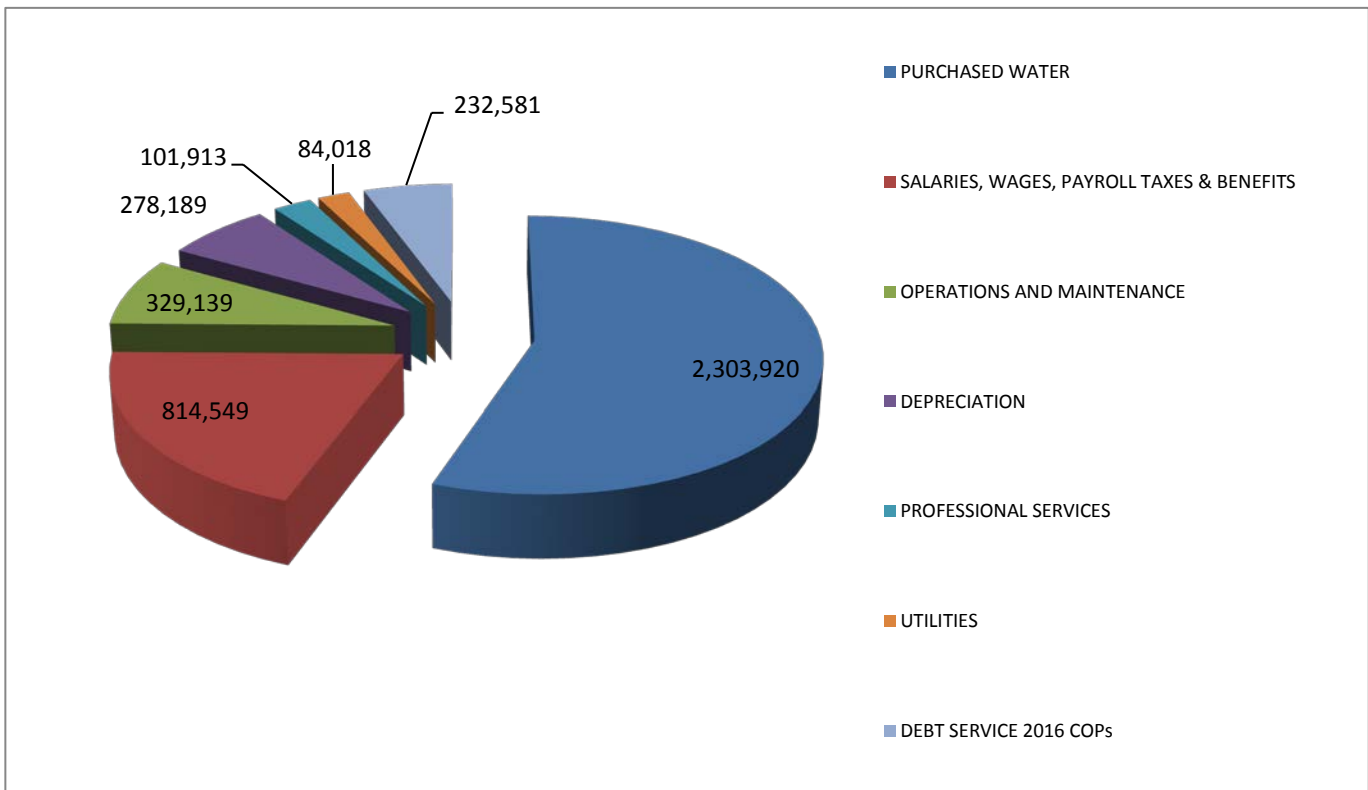
Interest Income - LAIF & COP Interest	-73,455.89
Total Adjustments to Increase Net Operating Surplus	<u>-73,455.89</u>

Net Revenue/(Expenses) 1,349,161.24

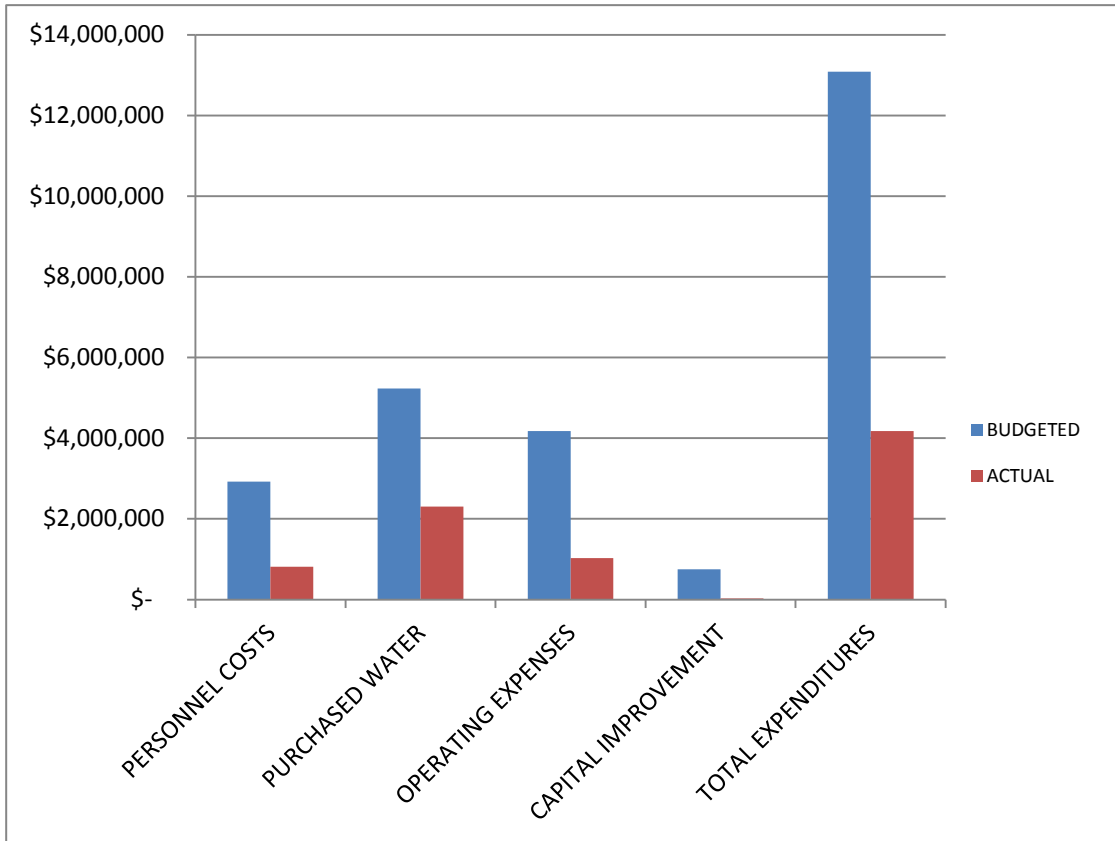
Net Operating Surplus/(Loss) Transfer to Capital 1,275,705.35

**MID-PENINSULA WATER DISTRICT
ACTUAL OPERATING EXPENDITURES SUMMARY
10/31/2017**

OPERATING EXPENDITURES	ACTUAL \$	% OF TOTAL
PURCHASED WATER	2,303,920	55.6%
SALARIES, WAGES, PAYROLL TAXES & BENEFITS	814,549	19.7%
OPERATIONS AND MAINTENANCE	329,139	7.9%
DEPRECIATION	278,189	6.7%
PROFESSIONAL SERVICES	101,913	2.5%
UTILITIES	84,018	2.0%
DEBT SERVICE 2016 COPs	232,581	5.6%
TOTAL OPERATING EXPENDITURES	4,144,310	100%



2016/2017 BUDGET vs ACTUAL TOTAL EXPENDITURES 10/31/2017



	BUDGETED	ACTUAL	BUDGETED % OF TOTAL	ACTUAL % OF TOTAL
TOTAL EXPENDITURES				
PERSONNEL COSTS	\$ 2,923,118	\$ 814,549	22%	20%
PURCHASED WATER	\$ 5,234,856	\$ 2,303,920	40%	55%
OPERATING EXPENSES	\$ 4,174,938	\$ 1,025,840	32%	25%
CAPITAL IMPROVEMENT	\$ 751,930	\$ 30,300	6%	1%
TOTAL EXPENDITURES	\$ 13,084,842	\$ 4,174,610	100%	100%

**MID-PENINSULA WATER DISTRICT
BUDGET FOR FY 2016-2017
Capital Projects**

DESCRIPTION	APPROVED FY 2017-2018 BUDGET \$	ACTUAL 7/1/2017 10/31/2017	REMAINING BALANCE/ (OVER BUDGET)	Target YTD % 33.7%
				Y-T-D % OF BUDGET
CAPITAL IMPROVEMENTS - WORK IN PROCESS (WIP)				
CIP 15-51 Francis Improvements	425,790	7,196	418,594	1.7%
CIP 15-53 Academy Improvements	276,140	4,601	271,539	1.7%
AMI Meter Change Out Program	-	-	0	N/A
CAPITAL IMPROVEMENTS - WIP TOTAL	701,930	11,796	690,134	1.7%
CAPITAL OUTLAY				
Miscellaneous Capital Outlay/Projects (A)	50,000	18,504	31,496	37.0%
CAPITAL OUTLAY TOTAL	50,000	18,504	31,496	37.0%
CAPITAL IMPROVEMENTS & CAPITAL OUTLAY TOTAL	751,930	30,300	721,630	4.0%
DEPRECIATION	1,050,000	278,189	771,811	26.5%
TRANSFER FROM OPS	(505,192)	1,275,705	(1,780,897)	-252.5%
TRANSFER (TO)/FROM CAPITAL RESERVES	207,122	(1,523,595)	1,730,717	-735.6%
CAPITAL OUTLAY/CAPITAL PROJECTS	(751,930)	(30,300)	(721,630)	4.0%
NET RESULTS OF CAPITAL	-	(0)	0	N/A

(A) Purchased Canon Copier to replace leased Ricoh Copier.

**MID-PENINSULA WATER DISTRICT
STATEMENT OF NET POSITION
PREVIOUS YEAR COMPARISON**

	31-Oct-18	31-Oct-17	\$ Change	% Change
ASSETS				
CURRENT ASSETS				
Total Checking/Savings	6,612,529.83	4,457,014.93	2,155,514.90	48.36%
Total COP Funds	18,832,916.51	0.00	0.00	100.0%
Total Accounts Receivable	1,247,697.58	1,204,404.39	43,293.19	3.6%
Total Other Current Assets	290,903.07	215,177.85	75,725.22	35.19%
TOTAL CURRENT ASSETS	26,984,046.99	5,876,597.17	21,107,449.82	359.18%
FIXED ASSETS				
Fixed Assets	43,876,784.02	41,945,088.75	1,931,695.27	4.61%
Accumulated Depreciation	-26,946,230.21	-26,090,100.35	-856,129.86	-3.28%
Construction in Progress	1,299,865.28	1,843,806.81	-543,941.53	-29.5%
TOTAL FIXED ASSETS	18,230,419.09	17,698,795.21	531,623.88	3.0%
TOTAL OTHER ASSETS	442,276.00	442,276.00	0.00	0.0%
TOTAL ASSETS	45,656,742.08	24,017,668.38	21,639,073.70	90.1%
LIABILITIES & EQUITY				
LIABILITIES				
CURRENT LIABILITIES				
Total Accounts Payable	217,371.09	59,854.33	157,516.76	263.17%
Total Other Current Liabilities	2,172,239.12	1,031,399.23	1,140,839.89	110.61%
TOTAL CURRENT LIABILITIES	2,389,610.21	1,091,253.56	1,298,356.65	118.98%
LONG TERM LIABILITIES				
Total COP Financing Debt (B)	18,255,000.00	0.00	18,255,000.00	100.0%
Total COP Premium (B)	909,772.50	0.00	909,772.50	100.0%
Total Other Long Term Liabilities (B)	1,351,457.45	1,351,457.45	0.00	0.0%
TOTAL LONG TERM LIABILITIES	20,516,229.95	1,351,457.45	19,164,772.50	1,418.08%
TOTAL LIABILITIES	22,905,840.16	2,442,711.01	20,463,129.15	837.72%
EQUITY				
3000 - Opening Bal Equity	0.00	0.00	0.00	0.0%
3800 - RESERVES *	5,704,853.91	4,055,161.46	1,649,692.45	40.68%
3940 - Fund Bal Invest in Util Plant	18,295,782.34	17,765,637.14	530,145.20	2.98%
Net Assets (A)	-1,249,734.33	-245,841.23	-1,003,893.10	-408.35%
TOTAL EQUITY	22,750,901.92	21,574,957.37	1,175,944.55	5.45%
TOTAL LIABILITIES & EQUITY	45,656,742.08	24,017,668.38	21,639,073.70	90.1%

	Balance @ Oct 2015	Balance @ Oct 2016	Balance @ Oct 2017	Budget for Reserve Policy
* RESERVES				
Capital Reserves	889,457	1,555,161	3,204,854	2,500,000
Emergency Reserves	2,000,000	2,000,000	2,000,000	2,000,000
Working Capital Reserves	500,000	500,000	500,000	500,000
TOTAL RESERVE FUNDS	3,389,457	4,055,161	5,704,854	5,000,000

(A) CalPERS Net Pension Liability - GASB 68 requirement.

(B) COP Financing Debt and Debt Premium total \$19,185,626.90.