

# San Diego County Water Authority

*QSA JPA Meeting*

October 1, 2019

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*Executive Vice President*  
*Portfolio Manager*





<b>SECTION 1</b>	<b>Economic Update</b>
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# Section 1 | Economic Update





- Underlying tenets of the US economy remain sound even with slower forecasted GDP growth in 2019
- Wage inflation has picked up with the sustained low unemployment rate
- Overall inflation continues to run modestly below the Fed's 2.0% objective
- Market based measure of inflation (i.e., TIPS) are larger concern for policy makers
- Low domestic yields are correlated with low overseas yields.

Annual Economic Indicators	est 2019	2018	2017
GDP	2.3	2.9	2.4
Monthly High Level Economic Indicators	Aug-19	Jul-19	Jun-19
Nonfarm Payrolls	130,000	159,000	178,000
Unemployment Rate (U3)	3.7	3.7	3.7
Underemployment Rate (U6)	7.2	7.0	7.2
Average Hourly Earnings y/y	3.2	3.2	3.2
CPI y/y	1.7	1.8	1.6
CPI Core y/y	2.4	2.2	2.1
PCE y/y	est 1.4	1.4	1.3
PCE Core y/y	est 1.8	1.6	1.6
Retail Sales	0.4	0.8	0.4
Consumer Confidence	134.2	135.8	124.3
Treasury Yields	08/31/19	07/31/19	06/30/19
2 year	1.51%	1.87%	1.76%
3 year	1.43%	1.83%	1.71%
5 year	1.39%	1.83%	1.77%
10 year	1.50%	2.02%	2.01%

Source: US Department of Labor, US Department of Commerce, Conference Board & Bloomberg. Please see disclosures at the end of this presentation.

## Section 2 | QSA Discussion and Strategies



# QSA JPA Projected Cash Flows as of July 1, 2019



## Goal:

- Develop an investment plan utilizing a 1-3-year investment horizon
- There are some large but unplanned expenses to be realized but they are not date-certain.

## Assumptions:

- Revenues only consist of payments from the members per the funding schedule and decrease over time.
- Expenses based on IID 5 Year Projections for FY20 Budget Development.
- Minor expenses related to administration of the JPA are paid annually.

	<b>Scenario One</b>		(Reflects Budgeted expenses as currently planned)			
	<b>2019-2020</b>	<b>2020-2021</b>	<b>2021-2022</b>	<b>2022-2023</b>	<b>2023-2024</b>	<b>2024-2025</b>
Cash Balance - July 1st	45,099,237	33,698,804	32,173,555	34,345,476	33,322,875	33,472,804
Revenues (Member Receipts)	4,279,013	7,191,051	10,884,302	7,533,582	8,701,127	6,385,988
Interest Income (2.5%)	1,127,481	842,470	804,339	858,637	833,072	836,820
Expenditures	(16,806,927)	(9,558,770)	(9,516,720)	(9,414,820)	(9,384,270)	(9,665,798)
Cash Balance - June 30	33,698,804	32,173,555	34,345,476	33,322,875	33,472,804	31,029,814

	<b>Scenario Two</b>		(Reflects Budgeted expenses based on past run rate (i.e., discount on expenses due to timing))			
	<b>2019-2020</b>	<b>2020-2021</b>	<b>2021-2022</b>	<b>2022-2023</b>	<b>2023-2024</b>	<b>2024-2025</b>
Cash Balance - Beg FY	45,099,237	37,450,536	37,615,843	41,239,674	41,357,354	42,392,115
Revenues (Member Receipts)	4,279,013	7,191,051	10,884,302	7,533,582	8,701,127	6,385,988
Interest Income (2.5%)	1,127,481	936,263	940,396	1,030,992	1,033,934	1,059,803
Expenditures	(13,055,195)	(7,962,007)	(8,200,867)	(8,446,893)	(8,700,300)	(8,961,309)
Cash Balance - End FY	37,450,536	37,615,843	41,239,674	41,357,354	42,392,115	40,876,597

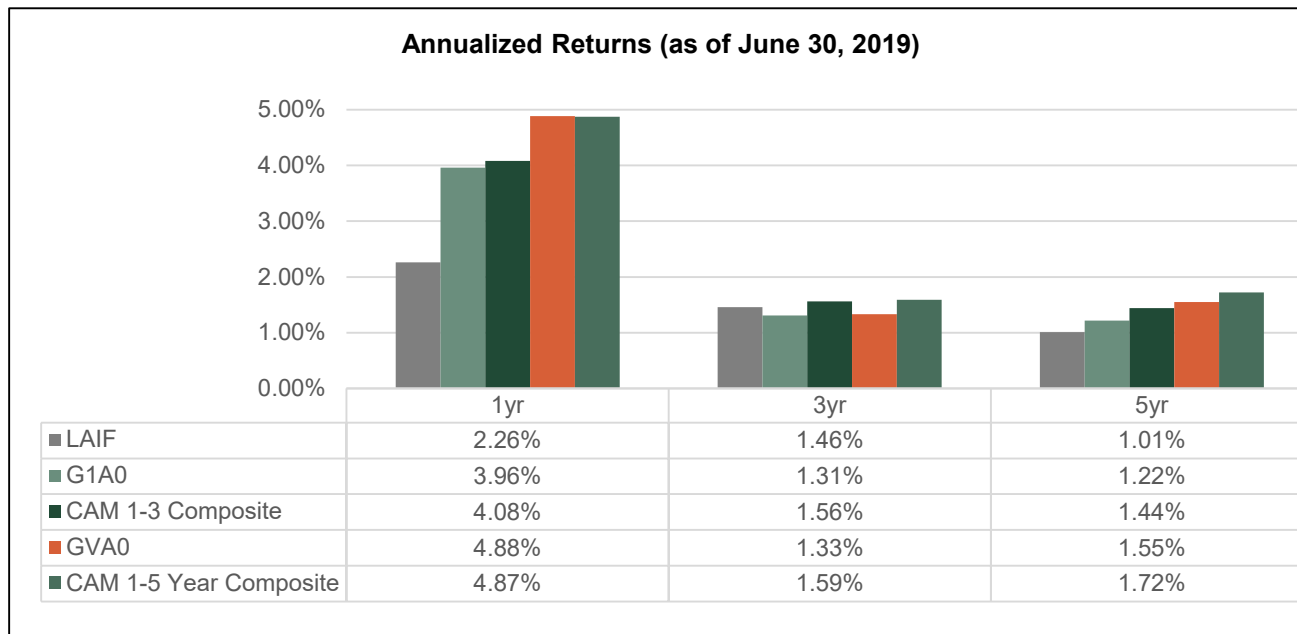
	<b>June 30, 2019</b>	<b>August 30, 2019</b>
Wells Fargo	4,164	4,164
LAIF	33,382,756	37,555,522
CAMP	7,509,546	7,539,551
	40,896,466	45,099,237

Source: Data provided by San Diego County Water Authority. Please see disclosures at the end of this presentation.

# Recommendations for QSA JPA Investment Strategy



- Generally a longer maturity active investment strategy will outperform a short-term investment style provided the time horizon to invest is at least 18 months.
- Based on the cash flow forecast for the QSA JPA conservatively \$25 million can be set aside for a longer maturity, total return, investment strategy.
  - If staff has a high confidence level on the timing of inflows and outflows throughout the year, additional monies could be allocated to a longer maturity investment strategy.
  - In the event of an unexpected liquidity need, the underlying investments in the longer maturity strategy can be converted to cash on short notice.



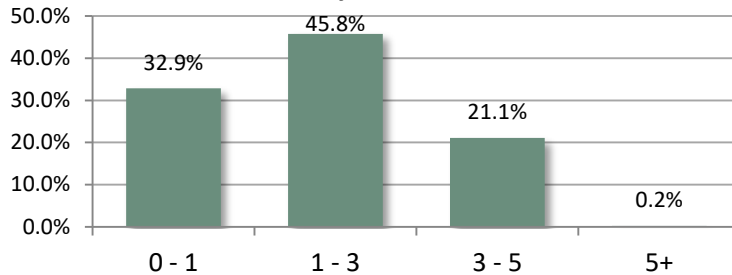
*Based on Chandler's Limited Maturity and Short Term Bond composites vs ICE BAML 1-3 Year US Treasury & Agency Index, ICE BAML 1-5 Year US Treasury & Agency Index, and LAIF as of 6/30/19. Performance is presented gross of investment management fees. Gross performance represents the returns before the deduction of fees and actual expenses which will reduce returns to the net value. All investment strategies have the potential for profit or loss. Past performance is not a guarantee of future results. Please see GIPS disclosures at the end of this presentation. For one-on-one presentation only.*



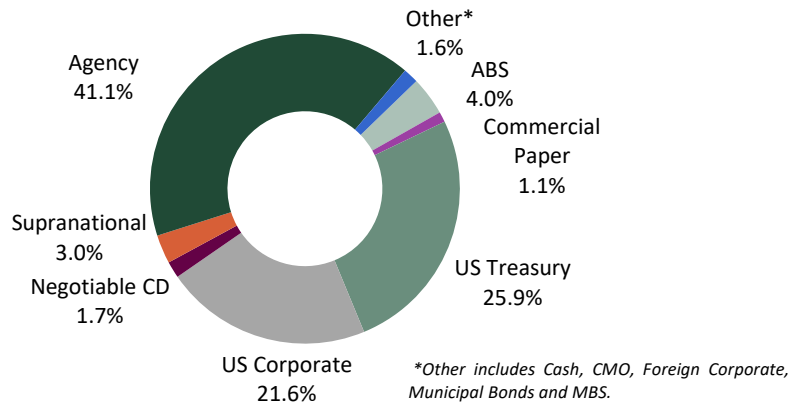
## Limited Maturity (1-3 Year)

Average Final Maturity	1.90 years
Average Duration	1.72 years
Average Market Yield	2.01%
Average Quality (S&P)	AA
Average Coupon	2.03%

### Maturity Distribution



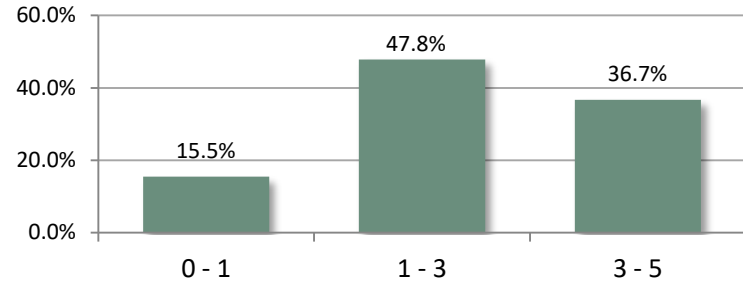
### Sector Allocation



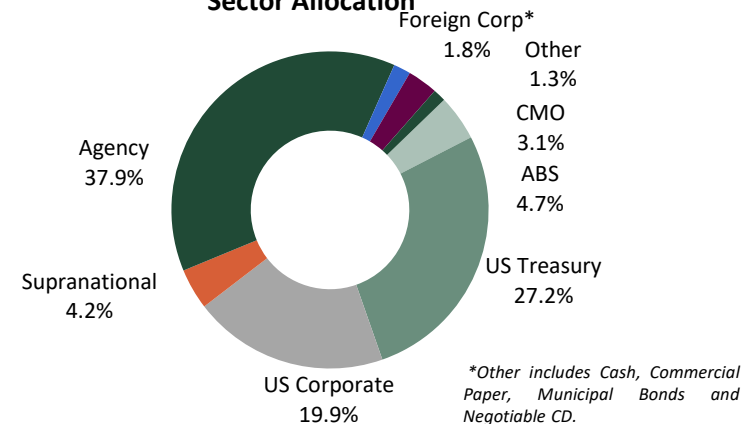
## Short Term Bond (1-5 Year)

Average Final Maturity	2.60 years
Average Duration	2.38 years
Average Market Yield	1.95%
Average Quality (S&P)	AA
Average Coupon	2.13%

### Maturity Distribution



### Sector Allocation



Based on Chandler's Limited Maturity and Short-Term Bond composite characteristics as of 6/30/2019. Credit Quality equivalent of composite/average of S&P, Moody's and Fitch ratings; "A" category includes "A-1" rated money market securities. The composite characteristic information presented above is supplemental information pursuant to GIPS®. There is no guarantee that investment in any of these styles will result in characteristics similar to those that appear in this presentation due to changes in economic conditions and other market factors. Past characteristic is not indicative of future results. Please see the GIPS disclosures at the end of this presentation for complete details.



## Section 3 | Disclosures





## Verification Report

Chandler Asset Management, Inc.  
6225 Lusk Boulevard  
San Diego, CA 92121

We have verified whether Chandler Asset Management, Inc. (the "Firm") (1) has complied with all the composite construction requirements of the Global Investment Performance Standards (GIPS®) on a firm-wide basis for the periods from July 1, 1997 through March 31, 2019, and (2) designed its policies and procedures to calculate and present performance in compliance with the GIPS standards as of March 31, 2019. The Firm's management is responsible for compliance with the GIPS standards and the design of its policies and procedures. Our responsibility is to express an opinion based on our verification. We conducted this verification in accordance with the required verification procedures of the GIPS standards. We also conducted such other procedures as we considered necessary in the circumstances.

In our opinion, the Firm has, in all material respects:

- Complied with all the composite construction requirements of the GIPS standards on a firm-wide basis for the periods from July 1, 1997 through March 31, 2019; and
- Designed its policies and procedures to calculate and present performance in compliance with the GIPS standards as of March 31, 2019.

This report does not relate to or provide assurance on any composite compliant presentation of the Firm and does not ensure the accuracy of any specific composite compliant presentation.

*ACA Performance Services, LLC*

ACA Performance Services, LLC  
July 31, 2019



## Annual Rates of Return 2009 through 2018

Year End	Returns			3 Year Annualized Standard Deviation		Dispersion		Assets		
	Total Gross	Total Net	Index	Composite	Index	Asset Wtd Std. Dev.	Number of Portfolios	Composite (MM)	% of Firm Assets	Firm (MM)
2009	2.10%	1.85%	0.78%	n/a	n/a	0.34%	9	224	4.51%	4,965
2010	2.96%	2.70%	2.35%	n/a	n/a	0.38%	8	201	3.50%	5,755
2011	1.88%	1.62%	1.55%	1.02%	1.02%	0.31%	9	222	3.74%	5,929
2012	1.16%	0.91%	0.43%	0.78%	0.73%	0.06%	15	474	7.37%	6,431
2013	0.30%	0.05%	0.36%	0.59%	0.50%	0.08%	18	797	11.12%	7,165
2014	0.87%	0.61%	0.62%	0.54%	0.43%	0.09%	21	879	9.88%	8,894
2015	0.74%	0.49%	0.54%	0.63%	0.56%	0.07%	27	1,328	11.31%	11,747
2016	1.11%	0.86%	0.88%	0.74%	0.76%	0.06%	31	1,081	8.39%	12,882
2017	0.85%	0.60%	0.43%	0.71%	0.74%	0.08%	32	1,178	8.60%	13,698
2018	1.69%	1.44%	1.59%	0.77%	0.85%	0.03%	31	1,905	11.51%	16,551

**Chandler Asset Management claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards.**

Chandler Asset Management has been independently verified by ACA Performance Services for the period of July 1, 1997 through March 31, 2019. The verification report is available upon request. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. Verification does not provide assurance on the accuracy of any specific performance report.

- Chandler Asset Management is an independent investment adviser registered as such with the Securities and Exchange Commission under the Investment Adviser's Act of 1940. Registration with the SEC does not imply a certain level of skill or training. Since 1988, Chandler Asset Management has provided fixed income investment management services to the public sector, as well as to foundations, endowments, individuals and corporations. A complete list and description of all of the firm's composites is available upon request.
- The Limited Maturity Composite is a composite of individually managed accounts with an average modified duration approximately equal to the modified duration of the ICE Bank of America Merrill Lynch 1-3 Year US Treasury Index and a final stated maturity of individual securities of five years. The minimum account size required to be included in this composite is \$2 million. This composite was created September 1988. The name of this composite was changed from Short-Term Fixed Income effective June 30, 2009.
- The ICE BAML 1-3 Year US Treasury Index tracks the performance of US dollar-denominated sovereign debt publicly issued by the US government in its domestic market. Qualifying securities must have at least one year remaining term to final maturity and less than three years remaining term to final maturity, a fixed coupon schedule, and a minimum amount outstanding of \$1 billion. Qualifying securities must have at least 18 months to final maturity at the time of issuance. Indexes are referred to for comparative purposes only and are not intended to parallel the risk or investment style of the portfolios in the Composite. Indexes do not utilize leverage. Index calculations do not reflect fees, brokerage commissions or other expenses of investing. Investors may not make direct investments into any index. Index data contained herein (and all trademarks related thereto) are owned by the indicated index provider, and may not be redistributed. The information herein has not been approved by the index provider.
- Valuations are computed and performance reported in U.S. Dollars.
- Performance is calculated using a time-weighted total rate of return, which links performance monthly, and is reported gross of investment management fees and custodial fees, but after all trading expenses. Results reflect the reinvestment of income, dividends and other earnings, and include realized and unrealized gains and losses and interest accrued through the last day of each month. Results do not reflect the potential impact of taxes. Past performance is not indicative of future results. Fees charged by Chandler Asset Management will reduce performance.
- Net-of-fees performance returns are calculated by reducing the monthly gross performance by one-twelfth (1/12) of the actual maximum applicable fee of 0.25%, which is representative of our current fee schedule for this composite. These monthly returns are then geometrically linked to produce annual returns which are presented before custodial fees but after management fees and all trading expenses. Fees are negotiable and additional information regarding Chandler's fees is included in our Part 2A of Form ADV.
- Dispersion is calculated using the asset weighted standard deviation of annual gross returns of those portfolios that were included in the composite for the entire year. For years when less than six portfolios were included in the composite for the full year, no dispersion measure is presented. The three-year annualized standard deviation measures the variability of the composite gross returns and the benchmark returns over the preceding 36-month period. Policies for valuing investments, calculating performance, and preparing GIPS reports are available upon request.
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# GIPS® Disclosures: Short Term Bond



## Annual Rates of Return 2009 through 2018

Year End	Returns			3 Year Annualized Standard Deviation		Dispersion Asset Wtd Std. Dev.	Number of Portfolios	Assets		Firm (MM)
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2009	2.80%	2.50%	0.91%	n/a	n/a	0.35%	29	1,554	31.29%	4,965
2010	3.97%	3.70%	3.46%	n/a	n/a	0.11%	33	1,906	33.12%	5,755
2011	2.90%	2.64%	3.19%	1.47%	1.65%	0.07%	32	1,866	31.48%	5,929
2012	1.80%	1.54%	0.98%	1.18%	1.27%	0.26%	38	2,133	33.17%	6,431
2013	0.04%	-0.21%	-0.16%	1.02%	1.10%	0.08%	39	2,168	30.26%	7,165
2014	1.42%	1.17%	1.24%	0.96%	0.99%	0.07%	40	2,325	26.14%	8,894
2015	1.15%	0.90%	0.96%	1.11%	1.18%	0.07%	44	3,403	28.97%	11,747
2016	1.30%	1.04%	1.08%	1.24%	1.39%	0.05%	49	4,131	32.07%	12,882
2017	1.08%	0.83%	0.67%	1.19%	1.34%	0.11%	48	3,783	27.62%	13,698
2018	1.53%	1.27%	1.55%	1.22%	1.40%	0.05%	48	3,485	21.06%	16,551

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Performance results are presented gross-of-advisory fees and represent the client's Total Return. The deduction of advisory fees lowers performance results. These results include the reinvestment of dividends and other earnings. Past performance may not be indicative of future results. Therefore, clients should not assume that future performance of any specific investment or investment strategy will be profitable or equal to past performance levels. All investment strategies have the potential for profit or loss. Economic factors, market conditions or changes in investment strategies, contributions or withdrawals may materially alter the performance and results of your portfolio.

Index returns assume reinvestment of all distributions. Historical performance results for investment indexes generally do not reflect the deduction of transaction and/or custodial charges or the deduction of an investment management fee, the incurrence of which would have the effect of decreasing historical performance results. It is not possible to invest directly in an index.

Fixed income investments are subject to interest, credit and market risk. Interest rate risk: the value of fixed income investments will decline as interest rates rise. Credit risk: the possibility that the borrower may not be able to repay interest and principal. Low rated bonds generally have to pay higher interest rates to attract investors willing to take on greater risk. Market risk: the bond market in general could decline due to economic conditions, especially during periods of rising interest rates.

### **ICE BAML 1-3 Year US Treasury & Agency Index**

The ICE BAML 1-3 Year US Treasury & Agency Index tracks the performance of US dollar denominated US Treasury and nonsubordinated US agency debt issued in the US domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch). Qualifying securities must have at least one year remaining term to final maturity and less than three years remaining term to final maturity, at least 18 months to maturity at time of issuance, a fixed coupon schedule, and a minimum amount outstanding of \$1 billion for sovereigns and \$250 million for agencies.



## **ICE BAML 1-5 Year US Treasury & Agency Index**

The ICE BAML US Treasury & Agency Index tracks the performance of US dollar denominated US Treasury and nonsubordinated US agency debt issued in the US domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch). Qualifying securities must have at least one-year remaining term to final maturity and less than five years remaining term to final maturity, at least 18 months to maturity at time of issuance, a fixed coupon schedule and a minimum amount outstanding of \$1 billion for sovereigns and \$250 million for agencies. (Index: GVA0. Please visit [www.mlindex.ml.com](http://www.mlindex.ml.com) for more information).

## **LAIF**

The California State Local Agency Investment Fund (LAIF) is an investment portfolio managed by the State Treasurer. All securities are purchased under the authority of Government Code Section 16430 and 16480.4 and include securities issued by entities of the US Government, including the US Treasury and Agencies, Corporate debt, Certificates of Deposit, Mortgage Backed Securities and certain loans to the State and state agencies. The average maturity of the Fund will be between 120 days and 18 months.

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