APPENDIX A

THE COUNTY

General

The County of Orange ("County") is bordered on the north by Los Angeles and San Bernardino Counties, on the east by Riverside County, on the southeast by San Diego County, and on the west and southwest by the Pacific Ocean. The County encompasses 789 square miles, has a population of over 3 million, and approximately 42 miles of ocean shoreline provide beaches, marinas, and other recreational areas for use by residents and visitors.

County Government

The County is a charter county divided into five supervisorial districts on the basis of population. The County is governed by an elected five-member Board of Supervisors (the "Board of Supervisors") with each Supervisor serving a four-year term. A Supervisor cannot serve more than two consecutive terms, however, there is no limitation on the total number of terms. The Chairman and Vice Chairman positions are elected annually by and from the members of the Board of Supervisors.

The County's organizational structure consists of six Elected Officers, seven positions appointed by and reporting to the Board of Supervisors, five Officers appointed by and reporting to the County Executive Officer ("CEO") and ten department heads selected by the Board of Supervisors and reporting to the Chief Operating Officer. The Elected Officers are elected by a countywide vote to four-year terms: the Assessor, Auditor-Controller, Clerk-Recorder, District Attorney-Public Administrator, Sheriff-Coroner, and the Treasurer-Tax Collector (the "Treasurer"). The positions appointed by and reporting to the Board of Supervisors are the Clerk of the Board, County Counsel, Performance Audit, Executive Director of the Office of Independent Review, CEO, Executive Director of the Office of Campaign Finance and Ethics Commission, and Internal Audit Director. The Board of Supervisors appoint all department heads including the Chief Probation Officer. The Presiding Judge of the Orange County Superior Court must concur with the appointment of the Chief Probation Officer. The remaining ten positions are the Registrar of Voters and department heads within the infrastructure, public services, and community services areas.

For Fiscal Year 2018-19, the Board of Supervisors eliminated the positions in the Office of the Performance Audit. The Board of Supervisors maintained the budget appropriations for the Office of the Performance Audit, however performance audit services will be performed under contracts with professional consultants as needed.

County Services

The County provides a wide range of services to its residents, including police, medical and health services, senior citizen assistance, library services, airport service, roads, solid waste management, harbors, beaches and parks, lifeguard services, and a variety of public assistance programs.

California counties administer numerous health and social service programs as the administrative agent of the State and pursuant to State law. Many of these programs have been either wholly or partially funded with State and federal funds. Under State law, the County is required to administer State and federal health programs and to provide for a portion of their costs with local revenues. The County is also responsible for all indigent medical care in the County pursuant to State law. The County does not operate its own hospital, but contracts for such services with private facilities. Certain municipal services are provided by the County to unincorporated communities and, on a contract basis, to some of the 34 incorporated cities within its boundaries. This arrangement is designed to allow cities to contract with the County for municipal services without incurring the cost of creating numerous city departments and facilities. Under the plan, the County provides any or all services to a city at the same level as provided in the unincorporated areas, or at any higher level for which the city may contract. Services are generally provided at cost.

There are two special districts, separate legal entities from the County, which provide services to County residents: the Orange County Flood Control District and the Orange County Housing Authority. The Board of Supervisors, sitting as each district's legislative body, governs these districts.

Regional fire protection services are provided by the Orange County Fire Authority, a joint powers authority with its own Board of Directors.

County Employment

As of July 2, 2018, the number of permanent filled employee positions of the County was 16,368. The following table sets forth the total number of County employees since 2010:

TABLE A-1

COUNTY OF ORANGE Employment Positions⁽¹⁾

2010	16,239
2011	15,965
2012	15,771
2013	15,852
2014	16,108
2015	16,144
2016	16,341
2017	16,365
2018	16,368

⁽¹⁾ Employment Positions represent the number of filled positions at fiscal year-end.

Source: County of Orange, County Budget Office.

Most County employees are represented by one of 17 bargaining units within eight labor organizations, the principal labor organization being the Orange County Employees Association ("OCEA"), which consists of the Community Services, County General, Office Services, Sheriff Special Officers, Supervisory Management, and Health Care Professional Units. Represented County employees and their appropriate bargaining agents are shown in the following table.

TABLE A-2

COUNTY OF ORANGE Employee Bargaining Representation and Number of Positions⁽¹⁾

Bargaining Agents	Number of Positions	Contract Term
Dai gaining Agents	1 051110115	
Orange County Employees Association	11,050	June 23, 2017 to June 20, 2019
Association of Orange County Deputy Sheriffs (AOCDS)	2,062	July 1, 2016 to June 30, 2019
AOCDS Probation Units	952	June 26, 2015 to June 22, 2018 ⁽²⁾
American Federation of State, County and Municipal		
Employees	1,546	June 24, 2016 to June 23, 2019
Orange County Managers Association	1,257	January 10, 2014 to June 20, 2019
Orange County Attorneys Association	522	May 15, 2015 to June 30, 2019
Teamsters Local 952	485	December 13, 2016 to June 20, 2019
International Union of Operating Engineers	141	June 26, 2015 to June 22, $2018^{(3)}$
Association of County Law Enforcement Managers	76	June 22, 2018 to June 20, 2019
Unrepresented	166	N/A

⁽¹⁾ Position data includes filled and vacant positions as of June 11, 2018.

⁽²⁾ On September 27, 2017, the Association of Orange County Deputy Sheriffs became the exclusively recognized representative for the Probation Supervisory Management and Probation Services Units under the Orange County Employee Relations Resolution. These Units were previously represented by the Orange County Employees Association. Contract negotiation is currently in process with the Probation Units to establish a new contract.

(3) Contract negotiation currently in process. County employees in the bargaining unit currently in the process of negotiations have historically continued to work under the terms of their previous contract with no interruption.

Source: County of Orange, County Budget Office.

COUNTY FINANCIAL INFORMATION

Financial Statements

The County's accounting policies and audited basic financial statements conform with generally accepted accounting principles for financial reporting established by the Governmental Accounting Standards Board (the "GASB").

The basic financial statements include both the government-wide and fund financial statements. The government-wide financial statements are prepared using the accrual basis of accounting and the economic resources measurement focus. The government-wide financial statements report long-term liabilities and deferred outflows and inflows, including those related to pension and other retirement benefits, and capital assets, including intangible assets. Depreciation expense and accumulated depreciation are included in the government-wide financial statements for equipment, buildings, and infrastructure. Amortization expense and accumulated amortization are included in the government-wide financial statements for the government-wide financial statements for intangible assets. The fund financial statements for the governmental funds are prepared under the modified accrual basis of accounting and the current financial resources measurement focus with revenues being recorded when available and measurable and expenditures recorded when related fund liabilities are incurred, with all current unpaid liabilities being accrued at year end. Fund financial statements are shown separately for specific major governmental funds, and in total for all other governmental funds. Fund financial statements for proprietary funds are reported under the accrual basis of accounting and the economic resources measurement focus.

The Auditor-Controller maintains the accounting system and records of account for all County funds. The Internal Audit Division, which reports to the Auditor-Controller, continually monitors internal controls. Legal compliance audits of State programs are conducted by State Controller auditors.

All of the County funds can be divided into three major categories of funds: governmental, proprietary, and fiduciary. Governmental funds include most of the County's basic services and are used to account for essentially the same functions reported as governmental activities in the government-wide financial statements. Proprietary funds consist of two types of funds: enterprise funds (which the County uses to account for its airport, waste management operations, and compressed natural gas facility) and internal service funds (which are used to accumulate and allocate costs internally among the County's various functions, such as insurance services, transportation, publishing and information technology). Fiduciary funds are used to account for assets held on behalf of outside parties.

The major governmental funds include the following funds: the County's General Fund; Flood Control District; Other Public Protection; and Mental Health Services Act. Financial data for nonmajor governmental funds are aggregated and reported under the "Other Governmental Funds" column in the fund financial statements. The major governmental funds associated with general government activities are briefly described below:

• The General Fund accounts for resources traditionally associated with government and all other resources, which are not required legally, or by sound financial management, to be accounted for in another fund. Revenues deposited to the General Fund are primarily derived from intergovernmental revenues (many of which are for restricted purposes such as public health and public assistance), property taxes, other taxes, charges for services, and other revenues. General Fund moneys are primarily expended for functions of public protection, public ways and facilities, health and sanitation, public assistance and general government. "General Purpose Revenues" describes that portion of the General Fund over which the County has discretion as to its expenditure, consisting primarily of property taxes. For discussion of General Purpose Revenues see "County General Fund Budget" herein.

- The Flood Control District is a group of funds used to account for the planning, construction, and operation of flood control and water conservation works, such as such as dams, basins, and trunk channels, and for the retardation, conservation, and controlled discharge of storm waters. Revenues consist primarily of property taxes restricted for flood control activities and charges for services.
- The Other Public Protection Fund accounts for certain safety and law enforcement activities such as the child support program, automated fingerprint identification systems, and investigation team. Revenues consist primarily of federal grants, state grants, fines, use of money and property, and charges for services.
- The Mental Health Services Act Fund became a major fund in Fiscal Year 2015-16. The Fund accounts for the County's mental health programs for children, transition age youth, adults, older adults and families pursuant to the State of California Mental Health Services Act. Revenues are derived primarily from a one percent income tax on personal income in excess of one million levied by the State.

The following table presents a summary of revenues and other financing sources, expenditures and other financing uses, and the net changes in fund balances for the governmental funds for the Fiscal Years ended June 30, 2014 through June 30, 2017.

TABLE A-3

COUNTY OF ORANGE GOVERNMENTAL FUNDS COMPARATIVE SCHEDULE OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES⁽¹⁾ Fiscal Years Ended June 30, 2014 through June 30, 2017 (In Thousands)

	2014	2015 ⁽²⁾	2016	2017
REVENUES AND OTHER FINANCING SOURCES				
General Fund	\$ 2,879,856	\$ 3,001,243	\$ 3,038,491	\$ 3,167,897
Roads	109,937			
Flood Control District	169,260	163,096	128,929	151,353
Other Public Protection	49,261	66,846	63,506	79,074
Teeter Plan Notes	50,786			
Mental Health Services Act		141,713	116,978	153,076
Other Governmental Funds	600,011	641,234	904,098	1,193,132
Total	\$ 3,859,111	\$ 4,014,132	\$ 4,252,002	\$ 4,744,532
EXPENDITURES AND OTHER FINANCING USES				
General Fund	\$ 2,808,016	\$ 2,853,121	\$ 2,975,161	\$ 3,144,843
Roads	107,694			
Flood Control District	154,993	121,287	116,206	144,469
Other Public Protection	48,203	66,747	63,656	81,587
Teeter Plan Notes	43,959			
Mental Health Services Act		104,115	115,244	138,075
Other Governmental Funds	615,209	649,795	810,900	1,014,615
Total	\$ 3,778,074	\$ 3,795,065	\$ 4,081,167	\$ 4,523,589
NET CHANGES IN FUND BALANCES				
General Fund	\$ 71,840	\$ 148,122	\$ 63,330	\$ 23,054
Roads	2,243			
Flood Control District	14,267	41,809	12,723	6,884
Other Public Protection	1,058	99	(150)	(2,513)
Teeter Plan Notes	6,827			
Mental Health Services Act		37,598	1,734	15,001
Other Governmental Funds	(15,198)	(8,561)	93,198	178,517
Total	\$ 81,037	\$ 219,067	\$ 170,835	\$ 220,943

⁽¹⁾ This statement is a summary statement only. For Fiscal Year 2016-17 results, see APPENDIX B – "COUNTY OF ORANGE, CALIFORNIA COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR THE YEAR ENDED JUNE 30, 2017." The complete Orange County Comprehensive Annual Financial Report as of June 30, 2017, including the Notes to the Basic Financial Statements therein, is an integral part of this Official Statement.

(2) There was a change in major governmental funds in Fiscal Year 2015-2016 in which Mental Health Services Act became identified as a major fund and Roads and Teeter Plan Notes are no longer identified as major funds. For comparative purposes, the balances shown in Fiscal Year 2014-15 reflect the change of major funds in Fiscal Year 2015-16.

Source: Orange County Comprehensive Annual Financial Reports dated June 30, 2014, June 30, 2015, June 30, 2016, and June 30, 2017.

The following table sets forth the audited General Fund Balance Sheet as of June 30, 2014 through June 30, 2017. The largest single source of funding in the General Fund portion of the County Budget is intergovernmental revenue. Budgeted intergovernmental revenue accounted for 51.7%, 49.7%, 49.2%, and 49.7% of all General Fund revenue sources for Fiscal Years 2015-16, 2016-17, 2017-18, and 2018-19 respectively. Approximately 38.2% of the County's Fiscal Year 2018-19 Modified Budget total revenues are

from the State. See "STATE OF CALIFORNIA FINANCIAL INFORMATION" in the forepart of this Official Statement.

TABLE A-4

COUNTY OF ORANGE GENERAL FUND BALANCE SHEET⁽¹⁾ June 30, 2014 through June 30, 2017 (In Thousands)

	2014	2015	2016	2017
ASSETS				
Pooled Cash/Investments	\$ 425.057	\$ 441.060	\$ 419.457	\$ 531,226
Imprest Cash Funds	1,864	1,862	1,834	1,834
Restricted Cash and Investments with Trustee	1,536	9	15	1
Investments ⁽²⁾		118,940	221,772	67,557
Receivables				
Accounts	18,909	10,420	10,486	9,590
Taxes	11,900	7,035	10,367	5,701
Interest/Dividends	533	2,600	1,454	1,794
Deposits	492	460	562	524
Advances	30	33	30	40
Allowance for Uncollectible Receivables	(4,399)	(6,237)	(4,844)	(4,077)
Due from Other Funds	63,956	89,278	78,793	104,918
Due from Component Unit	455	201	375	339
Due from Other Governmental Agencies	350,784	353,350	353,668	330,367
Inventory of Materials and Supplies	902	867	891	838
Prepaid Costs	316,320	331,939	327,198	367,934
Advances to Other Funds	3,800	3,800	3,800	3,800
Total Assets	\$ 1,192,139	\$ 1,355,617	\$ 1,425,858	\$ 1,422,386
LIABILITIES AND FUND BALANCES				
Liabilities				
Accounts Payable	\$ 65,154	\$ 49,300	\$ 56,689	\$ 47,903
Salaries and Employee Benefits Payable	57,182	83,350	103,724	43,688
Retainage Payable	2.044	1.395	1.495	1.750
Interest Payable	1,135	1,084	1,671	2,376
Deposits from Others	1,553	1.654	1.615	1,534
Due to Other Funds	35,780	31,311	35,954	43,725
Due to Component Unit		3		
Due to Other Governmental Agencies	27,847	13,822	20,410	14,634
Unearned Revenue	19,410	44,410	25,450	38,668
Bonds Payable	325,405	339,625	334,275	375,540
Advances from Other Funds	3,134	2,351	1,567	784
Total Liabilities	\$ 538,644	\$ 568,305	\$ 582,850	\$ 570,602
DEFERRED INFLOWS OF RESOURCES ⁽³⁾				
Unavailable Revenue- Intergovernmental Revenues	\$ 73,769	\$ 72,172	\$ 68,501	\$ 58.651
Unavailable Revenue- SB 90 Mandated Claims, Net	47,926	39,653	28,404	24,637
Unavailable Revenue- Property Taxes	9,485	9,078	8,878	8,364
Unavailable Revenue- Others	5,929	1,901	9,387	9,240
Total Deferred Inflows of Resources	\$ 137,109	\$ 122,804	\$ 115,170	\$ 100,892
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FUND BALANCES	¢ 201 000	¢ 226 606	¢ 221 000	¢ 270 570
Nonspendable ⁽⁴⁾	\$ 321,022	\$ 336,606	\$ 331,889	\$ 372,572
Restricted	42,028	31,486	49,230	39,581
Assigned	153,336	269,529	321,064	265,293
Unassigned		26,887	25,655	73,446
Total Fund Balances	\$ 516,386	\$ 664,508	\$ 727,838	\$ 750,892
Total Liabilities, Deferred Inflows of Resources and Fund Balances	\$ 1,192,139	\$ 1,355,617	\$ 1,425,858	\$ 1,422,386
Resources and Fund Datances				

⁽¹⁾ This Statement is a summary statement only. The complete Orange County Comprehensive Annual Financial Reports dated June 30, 2017, including the Notes to the Basic Financial Statements therein is an integral part of this statement. For Fiscal Year 2016-17 results, see APPENDIX B – "COUNTY OF ORANGE, CALIFORNIA COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR THE YEAR ENDED JUNE 30, 2017."

⁽²⁾ Non-pooled investments with the Treasurer for General Fund Tax Exempt Non AMT securities for any excess cash over the 5% reasonable working capital reserve.

- (3) GASB Statement No. 65 established new accounting and financial reporting standards that, among other things, reclassify certain items of unavailable revenue that were previously reported as liabilities as deferred inflows of resources. See Note 1 the "Notes to the County's Basic Financial Statements Fiscal Year Ended June 30, 2017" in Appendix B of this Official Statement.
- (4) Includes an amount rear lear ball sol, but is inperiad bold and bold

Sources: Orange County Comprehensive Annual Financial Reports dated June 30, 2014 through June 30, 2017.

The following table presents a more detailed summary of revenues, expenditures and changes in fund balances for the General Fund for Fiscal Years 2013-14 through 2016-17.

TABLE A-5

COUNTY OF ORANGE COMPARISON OF STATEMENT OF GENERAL FUND REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCE⁽¹⁾ Fiscal Years Ended June 30 (In Thousands)

	2014	2015	2016	2017
REVENUES				
Taxes ⁽²⁾	\$ 599,366	\$ 629,603	\$ 671,363	\$ 681,836
Licenses, Permits & Franchises	22,595	22,929	25,154	25,362
Fines, Forfeitures & Penalties	33,039	82,063	44,375	67,648
Use of Money and Property	5,260	5,272	18,318	6,733
Intergovernmental Revenues	1,593,107	1,602,817	1,626,855	1,613,969
Charges for Services	410,108	408,872	386,117	422,591
Other Revenues	13,124	15,601	18,648	17,790
TOTAL REVENUES	\$ 2,676,599	\$ 2,767,157	\$ 2,790,830	\$ 2,855,929
EXPENDITURES				
General Government	\$ 140,816	\$ 177,280	\$ 176,002	\$ 195,250
Public Protection	1,082,961	1,126,878	1,182,458	1,260,068
Public Ways and Facilities	35,570	32,192	30,792	30,633
Health and Sanitation	620,256	514,371	526,216	577,050
Public Assistance	795,582	851,488	881,261	891,309
Capital Outlay	12,454	18,901	20,794	23,532
Principal Retirement	21,622	21,568	4,530	5,129
Interest	9,844	8,172	7,451	8,564
Debt Issuance Costs	200			
TOTAL EXPENDITURES	\$ 2,719,305	\$ 2,750,850	\$ 2,829,504	\$ 2,991,535
Excess (Deficit) of Revenues Over Expenditures Other Financing Sources (Uses)	\$ (42,706)	\$ 16,307	\$ (38,674)	\$ (135,606)
Transfers In ⁽³⁾	203,257	234,086	247,661	311,968
Transfers Out ⁽³⁾	(88,711)	(102,271)	(145,657)	(153,308)
Total Other Fin. Sources (Uses)	114,546	131,815	102,004	158,660
Net Change in Fund Balances	\$ 71,840	\$ 148,122	\$ 63,330	\$ 23,054
Fund Balances – Beginning of Year	444,546	516,386	664,508	727,838
FUND BALANCES – End of Year	\$ 516,386	\$ 664,508	\$ 727,838	\$ 750,892

(1) This Statement is a summary statement only. The complete Orange County Comprehensive Annual Financial Reports dated June 30, 2017, including the Notes to the Basic Financial Statements therein is an integral part of this Official Statement. For Fiscal Year 2016-17 results, see APPENDIX B – "COUNTY OF ORANGE, CALIFORNIA COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR THE YEAR ENDED JUNE 30, 2017."

⁽²⁾ Primarily property taxes, as well as local sales and other taxes.

(3) Interfund transfers reflect the flow of assets between funds and component units of the County. See Note 8 in the "Notes to the County's Basic Financial Statements Fiscal Year Ended June 30, 2017" in Appendix B of this Official Statement.

Sources: Orange County Comprehensive Annual Financial Reports dated June 30, 2014 through June 30, 2017.

County General Fund Budget

Budget Process. The County's annual budget process begins in late December. The CEO's County Budget Office (the "Budget Office") prepares budget policy and detailed budget instructions for County departments. County departments then prepare their budget requests and submit them to the Budget Office. The Budget Office reviews and analyzes the departments' budget requests and makes recommendations to the CEO. The Budget Office will also, in coordination with the Auditor-Controller's office, establish the level of non-departmental, County-wide revenues that will be available to the County. The budget is compiled, balanced, and reviewed with the CFO and CEO.

The main focus of the budget is the "Discretionary General Fund," a component of the General Fund, which represents the County programs that are funded by General Purpose Revenue. General Purpose Revenue is revenue received in the General Fund that is not specific to a program or service, and consists primarily of property taxes. General Purpose Revenue is available to meet lease revenue and pension bond debt service requirements, match or maintain requirements in State and federal programs and can otherwise be allocated at the discretion of the Board of Supervisors. General Purpose Revenues total \$811.2 million or about 12.6% of the total Fiscal Year 2018-19 Adopted Budget as of August 8, 2018 and approximately 23.5% of the General Fund Budget. In comparison, General Purpose Revenue totaled \$794.9 million or about 11.6% of the total Fiscal Year 2017-18 Final Budget and approximately 23.2% of the General Fund Budget. The General Fund Net County Cost ("NCC") totals \$820 million and is approximately 12.8% of the total Fiscal Year 2018, 2018 and approximately 23.7% of the General Fund Budget.

The Board of Supervisors annually holds budget hearings and adopts a final budget for the County in June. The Board of Supervisors adopted a final budget for Fiscal Year 2018-19 on June 26, 2018. After budget adoption there are budget adjustments that occur throughout the fiscal year which are primarily presented in Quarterly Budget Reports to the Board of Supervisors. The adopted budget and adjustments are referred to as the Modified Budget.

Strategic Financial Plan. In 1997, the County initiated a strategic financial planning process to establish strategic priorities. The process is a management tool and provides a structure to help the County face both short-term and long-term operational decisions. The Strategic Financial Plan, which is updated annually, contains a baseline revenue and expense forecast over a five-year horizon. In addition, a ten-year horizon is used to estimate the ability of the County to fund certain strategic priorities and implementation of new initiatives, programs, or facilities. The most recent Strategic Financial Plan was released in December 2017 and was used in the development of the Fiscal Year 2018-19 Budget.

Reserves. As of August 8, 2018, the County had \$653.1 million budgetary reserves within the General Fund, which had the following balances: \$427.7 million assigned toward the reserve target (equal to two months of General Fund operating revenue or \$508.5 million); assigned for operations \$60.0 million (which includes \$55.0 million allocated for future repayment to the State of Vehicle License Fee Adjustment Amounts; see "General Fund Revenues—Vehicle License Fee Revenue Reallocation and Repayment" herein); \$30.0 million Teeter loss reserves fund excess; maintenance and construction reserve \$11.6 million; capital project reserve \$57.0 million, contingency reserve of \$65.0 million, and a imprest cash/cash difference reserve of \$1.8 million. These reserve balances, at fiscal year-end, would be included in the Basic Financial Statement for Governmental Funds in the County's Comprehensive Annual Financial Report. The General Fund reserve balance for assigned reserve target would be reported as Nonspendable Fund Balance (see Note 4 on Table A-4 herein). The reserve balances for operations, Teeter loss reserve fund excess, maintenance and construction, capital projects, and contingencies would be reported as Assigned Fund Balance. These reserve balances are not legally restricted for any specific purpose; however, they are reserved by Board action and require a four-fifths vote to appropriate.

Certain other funds held outside the County General Fund have also been established, including program reserves in the amount of approximately \$63.1 million as of July 31, 2018 for sheriff and law enforcement, child support, social services, and the health care agency.

In addition, the County maintains an account (the "Investment Account"), originally funded with proceeds of the County's 1994 Pension Obligation Bonds in the Orange County Employees Retirement System ("OCERS") which is commingled with the OCERS pool for investment purposes. Pursuant to an agreement between the County and OCERS, the County may direct the expenditure of any portion of the Investment Account to offset County contributions to OCERS. The monies in the Investment Account may not be withdrawn by the County or used for expenditures other than OCERS contributions. The balance in the Investment Account as of June 30, 2018 was \$135.4 million. For recent expenditures from the Investment Account, see "Table A-18, Orange County Employee Retirement System County Contribution."

Comparative Budgets for Fiscal Years 2015-16 through 2018-19

The following table sets forth the County's Final Budgets (which include all budget adjustments made after budget adoption) for Fiscal Year 2015-16 through Fiscal Year 2017-18 and the Adopted Budget for Fiscal Year 2018-19.

TABLE A-6

COMPARISON OF GENERAL FUND FINAL OR ADOPTED BUDGETS FOR FISCAL YEARS 2015-16 TO 2018-19

	2015-16 ⁽¹⁾	2016-17 ⁽¹⁾	2017-18 ⁽¹⁾	2018-19 ⁽¹⁾
	Final Budget	Final Budget	Final Budget	Adopted Budget
REQUIREMENTS:				
Public Protection	\$ 1,154,900,802	\$ 1,213,516,840	\$ 1,263,275,290	\$ 1,258,326,465
Health & Community & Social Services	1,635,346,756	1,677,616,903	1,710,518,620	1,747,526,592
Infrastructure & Environmental Resources ⁽²⁾	96,542,552	98,972,335	116,899,628	113,094,736
General Government & Services ⁽³⁾	175,633,084	175,235,341	177,290,869	168,171,413
Capital Improvements ⁽⁴⁾	58,804,388	70,473,040	71,724,289	64,003,054
Debt Service ⁽⁵⁾	58,359,689	28,915,270	8,514,959	1,542,115
Insurance, Reserves & Miscellaneous ⁽⁶⁾	41,997,963	88,233,890	74,518,200	102,386,846
Total Requirements	\$ 3,221,585,234	\$3,352,963,619	\$ 3,422,741,855	\$ 3,455,051,221
AVAILABLE FUNDS:				
Property Taxes ⁽⁷⁾	\$ 645,114,419	\$ 664,066,177	\$ 693,860,000	\$ 739,230,000
Sales and Other Taxes	7,642,000	7,421,000	7,952,000	8,165,000
Licenses, Permits & Franchises	24,801,856	26,191,782	26,541,617	26,397,738
Fines, Forfeitures & Penalties ⁽⁸⁾	33,973,817	63,426,590	32,651,489	34,632,714
Use of Money & Property ⁽⁹⁾	15,960,550	6,837,144	8,783,507	11,314,080
Intergovernmental Revenues ⁽¹⁰⁾	1,648,932,484	1,650,849,929	1,680,118,352	1,712,494,533
Charges for Services ⁽¹¹⁾	441,372,018	478,731,879	489,839,549	502,311,201
Miscellaneous Revenues ⁽¹²⁾	25,629,773	19,813,105	28,407,826	16,784,204
Other Financing Sources ⁽¹³⁾	345,247,026	404,386,614	444,542,184	394,911,798
Decreases to Reserves ⁽¹⁴⁾	32,911,291	31,239,399	10,045,331	8,809,953
Total Available Funds	\$ 3,221,585,234	\$ 3,352,963,619	\$ 3,422,741,855	\$ 3,455,051,221

⁽¹⁾ Final Budgets include all budget adjustments throughout the year after budget adoption. Adopted Budget was approved by the Board of Supervisors on June 26, 2018.

(2) Fiscal Year 2017-18 budget included increase in Debt Service for Central Utility Facility Bonds and decrease in cost apply for Utilities and Custodial Services, which resulted in overall increase in appropriations.

(3) Fiscal Year 2015-16 Budget included \$6.5 million for the Countywide Accounting and Personnel System software upgrade and \$10 million in additional funding for current operations and one-time costs. Fiscal Year 2016-17 and 2017-18 included additional funding for one-time costs for Property Tax System upgrades and increase in funding for current operations.

⁽⁴⁾ Fiscal Years 2015-16, 2016-17, 2017-18, and 2018-19 include one-time additional funding for planned capital projects.

⁽⁵⁾ Fiscal Year 2016-17 budget decrease is due to the reduction in debt service payments for 2005 Lease Revenue Refunding Bonds. Fiscal Years 2017-18 and 2018-19 budget decrease is due to a reduction in waste importation revenue to pay down balances in the plan administered accounts.

⁽⁶⁾ Fiscal Years 2015-16, 2016-17, 2017-18, and 2018-19 Budgets include the AB 701 Vehicle License Fee Revenue Allocation (VLFAA) settlement payment to the State, \$15 million, \$25 million, \$50 million, and \$55 million respectively, contingency funds for mid-year adjustments, and funding for one-time capital projects.

⁽⁷⁾ Fiscal Years 2016-17, 2017-18, and 2018-19 increase is due to a recovering housing market and additional allocation of residual property taxes from the dissolution of Redevelopment Agencies.

(8) Fiscal Year 2016-17 increase is due to one-time \$26 million litigation settlement with a contractor related to the development of a new property tax system.

- ⁽⁹⁾ Fiscal Year 2015-16 Budget included a one-time \$10.2 million in state-mandated cost reimbursements (SB90). FY 2017-18 and 2018-19 increase is due to higher interest earnings and higher cash balances.
- (10) This funding is comprised of Federal and State grants and reimbursements, matching funds and State-distributed revenues. The overall changes are due to changes in caseload and additional revenues from the State for the 2012 Realignment of various public safety, social services, and health programs. See "Fiscal Year 2012 Realignment," below.
- (11) Increases due to an increase in billings for cost of services to cities which contract for Sheriff services, increase in correctional medical services, and charges from Health Care Agency for Mental Health Services.
- ⁽¹²⁾ Fiscal Year 17-18 includes increase in revenue from the Sheriff Court Operations of \$4.5 million.
- (13) Includes operating transfers from other funds within the County including transfers from the Teeter Program and departmental transfers from Non-General Funds for the reimbursement of program expenditures. Increase from Fiscal Year 2016-17 to 2017-18 is due to increased transfers from the Health Care Agency, Social Services Agency, Teeter Program, and OC Waste and Recycling importation program.
- (14) Governmental Accounting Standards Board pronouncement No. 54 requires all year-end fund balance available be reclassified and transferred to reserves. Although budgeted as a decrease, Fiscal Years 2015-16, 2016-17 and 2017-18 actual year-end fund balance reclassified and transferred to reserves were \$53.8, \$46.7 and \$35.1 million respectively

Source: County of Orange, County Budget Office.

Comparative General Purpose Revenue and Net County Cost for Fiscal Years 2015-16 through 2018-19

The following table sets forth the County's Final Budgets (which include all budget adjustments made after budget adoption) for Fiscal Year 2015-16 through Fiscal Year 2017-18 and the Adopted Budget for Fiscal Year 2018-19.

TABLE A-7

COMPARISON OF GENERAL PURPOSE REVENUE AND NET COUNTY COST FINAL OR ADOPTED BUDGETS FOR FISCAL YEARS 2015-16 TO 2018-19

	2015-16 ⁽¹⁾ Final Budget	2016-17 ⁽¹⁾ Final Budget	2017-18 ⁽¹⁾ Final Budget	2018-19 ⁽¹⁾ Adopted Budget
NET COUNTY COST:				
Public Protection ⁽²⁾	\$ 406,034,712	\$ 430,607,525	\$ 457,672,145	\$ 441,667,262
Health & Community & Social Services	125,775,607	132,332,350	123,314,050	129,428,329
Infrastructure & Environmental Resources	21,031,559	21,930,934	39,291,299	37,104,879
General Government & Services (3)	130,244,596	118,317,744	120,987,210	116,247,148
Capital Improvements ⁽⁴⁾	30,324,060	27,326,273	16,519,934	22,933,197
Debt Service	872,229	872,229	871,929	236,347
Insurance, Reserves & Miscellaneous ⁽⁵⁾	10,869,682	36,715,927	46,291,421	72,383,004
Total Requirements	\$ 725,152,445	\$ 768,102,982	\$ 804,947,988	\$ 820,000,166
REVENUE (GPR):	\$ 622 618 000	\$ 663 714 000	\$ 694 170 000	\$ 739 753 000
Property Taxes	\$ 622,618,000	\$ 663,714,000	\$ 694,170,000	\$ 739,753,000
Sales and Other Taxes	7,642,000	7,421,000	7,952,000	8,165,000
Licenses, Permits & Franchises	2,758,368	2,807,635	2,657,824	2,724,255
Fines, Forfeitures & Penalties	18,571,000	19,773,000	19,083,000	21,469,000
Use of Money & Property ⁽⁶⁾	1,600,000	2,775,000	4,600,000	6,500,000
Intergovernmental Revenues	2,808,000	2,810,000	3,659,000	3,197,000
Charges for Services ⁽⁷⁾	21,783,000	16,449,406	21,371,000	22,395,000
Miscellaneous Revenues ⁽⁸⁾	2,486,000	1,560,000	2,521,671	1,256,000
Other Financing Sources ⁽⁹⁾	11.974.786	19,332,542	39,198,162	6,253,958
Decreases to Reserves (10)	32,911,291	31,239,399	10,045,331	8,809,953
Total Available Funds	\$ 725,152,445	\$ 768,102,982	\$ 804,947,988	\$ 820,000,166

⁽¹⁾ Final Budgets include all budget adjustments throughout the year after budget adoption. Adopted Budget was approved by the Board of Supervisors on June 26, 2018.

(2) Fiscal Year 2016-17 Net County Cost increase for Public Safety for: (a) additional \$23 million funding to maintain the current level of service and (b) additional \$4 million funding to expand level of service for District Attorney, Sheriff-Coroner, and Public Administrator. Fiscal Year 2017-18 increase and subsequent Fiscal Year 2018-19 due to a one-time adjustment to Net County Cost for Public Safety in Fiscal Year 2017-18.

- (3) Fiscal Year 2016-17 Net County Cost decrease for General Government & Services for: (a) decrease in one-time funding for CAPS+ Upgrade by \$6.5 million, outside legal counsel services by \$3 million, and 2015 primary election services by \$4.5 million offset by increases in \$2.4 million funding to maintain the current level of service for Assessor, Auditor-Controller, Clerk of the Board, and Treasurer-Tax Collector and \$0.5 million funding to expand level of services for newly created Campaign Finance and Ethics Commission. Fiscal Year 2017-18 Net County Cost increase for additional \$0.8 million funding for Assessor, Auditor-Controller, and Clerk of the Board. Fiscal Year 2018-19 reduction in Net County Cost due to reduced general election expenses.
- (4) Fiscal Years 2016-17 and 2017-18 Net County Cost decrease due to decrease in one-time funding for capital projects. Fiscal Year 2018-19 increase due to capital projects for the Sheriff's facilities.
- ⁽⁵⁾ Fiscal Years 2015-16, 2016-17, 2017-18 and 2018-19 increase in Net County Cost is primarily from Miscellaneous Fund budget for increase in VLFAA appropriations and other one-time appropriations for capital projects.
- ⁽⁶⁾ Changes in Use of Money & Property is due to changes in interest earnings from increases of cash balances.
- ⁽⁷⁾ Fiscal Year 2016-17 decrease is due to one-time decline in Assessment and Tax Collection Fees (PTAC) revenue.
- (8) Fiscal Years 2016-17, 2017-18 and 2018-19 changes in Miscellaneous Revenues is due to increases and decreases in excess revenue distribution from Bankruptcy Plan of Adjustment.
- ⁽⁹⁾ Fiscal Years 2016-17 and FY 2017-18 increase in Other Financing Sources is due to an increase of a one-time transfer amount from the Teeter Fund and transfer of excess reserves funding from 2005 lease revenue refunding bonds. Fiscal Year 2018-19 decrease is due to lower budgeted transfer from the teeter Fund.
- ⁽¹⁰⁾ The draw from reserves is primarily related to the use of prior year fund balance for one-time planned capital projects and changes approved by the Board.

Source: County of Orange, County Budget Office.

Revenue Assumptions Incorporated into the Fiscal Year 2018-19 Budget

The following additional assumptions were incorporated into the Fiscal Year 2018-19 County Budget:

- The Fiscal Year 2017-18 Local Assessed Roll of Values increased by 6.02%. The estimated Fiscal Year 2018-19 total property tax revenue reflects an overall 4.4% increase which is consistent with economists' forecasts.
- Revenue from secured property taxes is assumed to grow in Fiscal Year 2018-19 based on a projection of 4.5% growth, which is consistent with economists' forecasts.
- The intergovernmental revenue from Public Safety Sales Tax (Proposition 172) is assumed to increase by 3.5% based on State and economists' projections and trend data.
- The Statewide allocation of AB109 (2011 Public Safety Realignment) revenue is budgeted with an increase of approximately \$5.7 million (or 6.7%) combined in base and growth revenue for Orange County.

General Fund Revenues

The largest single source of funding in the General Fund portion of the County Budget is intergovernmental revenue, many of which are for restricted purposes such as public health, assistance and other human services and public safety. Other revenues include shared taxes, such as the statewide sales tax for public safety. Budgeted intergovernmental revenue accounted for 51.7%, 49.7%, 49.2%, and 49.7% of all General Fund revenue sources for Fiscal Years 2015-16, 2016-17, 2017-18, and 2018-19 respectively. Approximately 38.2% of the County's Fiscal Year 2018-19 Adopted Budget total revenues are from the State. Changes in the revenues received by the State can affect the amount of funding, if any, received by the County from the State. The County cannot predict the outcome of future State budget negotiations and there are no assurances that actions taken by the State will not materially affect the financial condition of the County. The County has historically not backfilled State revenues shortfalls with discretionary revenues. See "STATE OF CALIFORNIA FINANCIAL INFORMATION" in the forepart of this Official Statement.

Ad Valorem Property Taxation

The largest source of discretionary General Fund revenues is derived from property taxes, which make up approximately 21.4% of the General Fund budget and 90% of discretionary revenues. Property taxes are levied by the County for each fiscal year on taxable real and personal property that is situated in the County based on the owner of record as of the preceding January 1. For assessment and collection purposes, property is classified either as "secured" or "unsecured" and is listed accordingly on separate parts of the assessment roll. The "secured roll" is that part of the assessment roll containing State assessed property and property on which a lien on real property is sufficient, in the opinion of the Assessor, to secure payment of the taxes. Other property is assessed on the "unsecured roll." In addition to regular secured taxes, supplemental taxes may also be levied by accelerating property reassessment when a change of ownership or completion of new construction has occurred. Supplemental tax bills representing the taxes on the changes in assessed value are prorated from the date of completion or change in ownership to the end of the fiscal year.

Secured Property Roll. Annual property taxes on the secured roll are due in two installments: November 1 and February 1 of each fiscal year. Property taxes are collected by the Treasurer in accordance with the California Revenue and Taxation Code. If unpaid, such taxes become delinquent after December 10 and April 10, respectively, and a 10% penalty accrues with respect to any delinquent payment. If such taxes remain unpaid as of July 1 of the fiscal year for which the tax was levied, the property securing the taxes is considered tax defaulted and may only be redeemed by payment of the delinquent tax, ten percent delinquency penalty, redemption fee, collection cost, and an additional penalty of 1.5 % per calendar month beginning July 1

of the year the property became tax defaulted. Delinquent taxes may be paid under an installment plan by paying current taxes plus all delinquent taxes over a five-year period. If *ad valorem* taxes are unpaid for a period of five years or more and an installment plan is not active, such properties may thereafter be sold by the Treasurer as provided by law unless paid in full by the day before the tax auction.

Teeter Plan. On June 29, 1993, the Board of Supervisors adopted the Teeter Plan pursuant to Sections 4701 through 4717 of the California Revenue and Taxation Code (the "Teeter Plan"). The taxing agencies in the County which participate in the Teeter Plan annually receive from the County the full amount of their share of taxes from the secured property tax roll, whether or not these taxes have been collected. The Teeter Plan provides these participating agencies with stable and timely cash flow without the collection risk, and the County receives the delinquency and redemption penalty amounts when the taxes are paid.

The County has used a combination of internal resources and external borrowing to finance its advances under the Teeter Plan. In 2013, the County issued its Teeter Plan Series B Notes (the "Teeter Notes"), which replaced a commercial paper program, for the purpose of financing its then current Teeter Plan distribution to taxing agencies participating in the Teeter Plan (the "Participating Agencies"). The Teeter Notes were purchased by Wells Fargo Bank, National Association through a direct placement pursuant to a Note Purchase and Reimbursement Agreement. In July of each year, the County issues additional Teeter Notes to fund the distribution to Participating Agencies under the Teeter Plan. On June 5, 2018, the County authorized the issuance of additional Teeter Notes in the maximum amount of \$100 million under an Amended and Restated Note Purchase and Reimbursement Agreement with Wells Fargo Bank, National Association. On July 16, 2018, the County issued \$61.1 million in Teeter Notes to fund the distribution to Participating Agencies and pay off the prior Notes outstanding. As of November 30, 2018, \$61.1 million in Notes remains outstanding. The County expects to retire portions of the Teeter Notes in December 2018 and June 2019 using delinquent base tax revenues associated with the Teeter Plan. The final maturity of the Notes is July 30, 2021.

Under the Teeter Plan, the penalties and interest associated with delinquent taxes, along with interest earnings on program cash and investment balances constitute General Purpose Revenue once the Tax Losses Reserve Fund is funded to its requirement (equal to 25% of delinquencies) and expenses of the program have been paid.

Unsecured Property Roll. Property taxes on the unsecured roll are due as of August 1 and become delinquent after August 31. A 10% penalty attaches to delinquent properties on the unsecured roll, and an additional penalty of 1.5% per month begins to accrue on November 1. The Treasurer has four ways of collecting delinquent unsecured personal property taxes: (1) a civil action against the taxpayer; (2) filing a certificate in the Office of the County Clerk specifying certain facts in order to obtain a judgment lien on certain property of the taxpayer; (3) filing a certificate of delinquency for recordation in the County Recorder's Office, in order to obtain a lien on certain property of the taxpayer; and (4) seizure and sale of personal property, improvements or possessory interest belonging or assessed to the delinquent taxpayer.

Allocation of Property Taxes. Property taxes are allocated to local governments pursuant to legislation implementing Article XIII A of the California Constitution. See "CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS—Article XIII A of the State Constitution" in the forepart of this Official Statement. Due to legislation enacted as part of the Fiscal Year 2004-05 State Budget and effective for Fiscal Year 2004-05 and thereafter, counties, including the County, and cities received property taxes from the schools' Educational Revenue Augmentation Fund ("ERAF") allocation to replace local sales taxes and vehicle license fees transferred to the State. The County has historically received approximately 11% of property tax revenues collected in the County for general revenue purposes. Legislation enacted with the Fiscal Year 2009-10 State Budget Act (SB 8 X3) increased property tax revenue allocations to the County by \$35 million annually in Fiscal Year 2009-10 and Fiscal Year 2010-11 and by \$50 million annually thereafter. With the Adoption of Assembly Bill 701 ("AB 701") on September 27, 2013, these revenues are no longer allocated to the County. For additional information regarding these revenues, see "Vehicle License Fee Revenue Reallocation and Repayment" herein.

Assessed Valuation. The Assessor assesses all property within the County except state-assessed properties (i.e., utility property, regulated railroads) which are assessed by the State Board of Equalization.

Since Fiscal Year 1981-82, property in California has been assessed at 100% of full cash value. Under Proposition 13, Article XIII A of the California Constitution, the maximum *ad valorem* tax on real property is limited to 1% of the full cash value, to be collected by counties and apportioned according to law. The full cash value may be adjusted upward annually to account for inflation at a rate not to exceed 2% per year, or to reflect a reduction in the consumer price index or comparable data for the area under taxing jurisdiction, or may be reduced in the event of declining property value caused by substantial damage, destruction or other factors. When property is transferred or new construction occurs it is assessed at its cash value at the time of such transfer or new construction. Due to the changes in assessment methodology under Article XIII A of the California Constitution, the County assessment roll is no longer proportional to market value. See "CONSTITUTIONAL AND STATUTORY LIMITATIONS ON TAXES AND APPROPRIATIONS—Article XIII A of the State Constitution" in the forepart of this Official Statement.

The following table shows a history of assessed valuations in the County since Fiscal Year 2008-09.

TABLE A-8

COUNTY OF ORANGE DETAIL OF ASSESSED VALUATION⁽¹⁾

Fiscal Year	Secured	Unsecured	Total	% Change
2008-09	\$ 408,491,848,742	\$ 20,317,375,534	\$ 428,809,224,276	3.91%
2009-10	402,572,097,312	20,393,498,698	422,965,596,010	-1.36
2010-11	400,814,188,871	19,937,386,517	420,751,575,388	-0.52
2011-12	405,588,977,572	19,180,663,956	424,769,641,528	0.95
2012-13	414,121,659,108	18,780,614,687	432,902,273,795	1.92
2013-14	429,070,697,346	18,678,458,709	447,749,156,055	3.43
2014-15	455,733,167,806	20,570,122,070	476,303,289,876	6.38
2015-16	485,007,445,623	19,642,914,061	504,650,359,684	5.95
2016-17	511,774,616,621	19,277,541,199	531,052,157,820	5.23
2017-18	543,455,064,150	20,206,980,147	563,662,044,297	6.14

⁽¹⁾ Figures in table include incremental value for redevelopment agencies. Property is assessed at taxable full cash value, pursuant to California Revenue and Taxation Code Section 135(a).

Sources: Orange County Office of Auditor-Controller, Assessed Valuation Reports.

Largest Secured and Unsecured Taxpayers. Table A-9 provides a list of the twenty largest secured taxpayers in the County for Fiscal Year 2017-18. For purposes of this table, multiple properties may be consolidated into a single entry.

TABLE A-9

COUNTY OF ORANGE TOP 20 SECURED TAXPAYERS FISCAL YEAR 2017-18

	Taxpayers ⁽¹⁾	Secured Tax Charge	% of Taxes ⁽²⁾
1.	Irvine Company	\$ 94,856,224	1.47%
2.	Walt Disney Parks & Resorts US	55,322,385	0.86
3.	Southern California Edison Company (Edison International)	38,457,750	0.59
4.	Five Points Holdings, LLC	19,541,581	0.30
5.	Sempra Energy (SDG&E, So. Cal. Gas)	10,785,475	0.17
6.	AT&T (Pacific Bell Telephone Company)	10,025,636	0.16
7.	United Laguna Hills Mutual (Laguna Woods)	9,882,519	0.15
8.	BEX Portfolio, Inc.	8,442,913	0.13
9.	Blackstone Real Estate Partners Fund (Ritz-Carlton, Montage)	7,571,665	0.12
10.	Belle Terra Associates, LLC	5,949,022	0.09
11.	South Coast Plaza	4,683,956	0.07
12.	Olen Properties Corporation	4,558,001	0.07
13.	Mainplace Shoppingtown LLC	3,913,858	0.06
14.	Knott's Berry Farm	3,891,187	0.06
15.	B. Braun Medical, Inc.	3,866,035	0.06
16.	The Mayer Corporation (Waterfront Beach Resort)	3,498,770	0.05
17.	Marblehead Development Partner	3,449,820	0.05
18.	KSL Capital Partners (Monarch Beach Resort)	3,195,103	0.05
19.	Manulife US REIT (Hancock S-REIT Irvine Corp.)	3,147,357	0.05
20.	Vestar	3,120,030	0.05
	TOTAL	\$ 298,159,287	4.61%

⁽¹⁾ Taxpayers are grouped under a parent company, if identifiable.

⁽²⁾ Total Secured Taxes as of September 30, 2017 were \$6,464,862,139.

Source: Orange County Treasurer-Tax Collector.

Table A-10 provides a list of the ten largest unsecured taxpayers in the County for Fiscal Year 2017-18.

TABLE A-10

COUNTY OF ORANGE TOP 10 UNSECURED TAXPAYERS FISCAL YEAR 2017-18

	Taxpayers ⁽¹⁾	Unsecured Tax Charge	% of Taxes ⁽²⁾
1.	Charter Communications, Inc.	\$ 3,783,915	0.93%
2.	Cox Communications	2,614,215	0.65
3.	Boeing Company	2,463,752	0.61
4.	Broadcom Corporation	1,517,019	0.37
5.	Southwest Airlines Company	1,454,917	0.36
6.	Allergan	1,313,276	0.32
7.	Panasonic Avionics Corporation	1,289,557	0.32
8.	Jazz Semiconductor, Inc.	1,276,757	0.32
9.	Applied Medical	1,274,081	0.31
10.	Kimberly-Clark Worldwide, Inc.	1,209,888	0.30
	TOTAL	\$ 18,197,377	4.49%

(1) Taxpayers are grouped under a parent company, if identifiable.
(2) Tatal Unsequend Taxos as of September 20, 2017 were \$405,000

Total Unsecured Taxes as of September 30, 2017 were \$405,006,210.

Source: Orange County Treasurer-Tax Collector.

Vehicle License Fee Revenue Reallocation and Repayment

All counties in California receive property taxes in lieu of Vehicle License Fee ("VLF") pursuant to Section 97.70 of the Revenue and Taxation Code. This system of property taxes in lieu of VLF started in 2004 when the Legislature enacted the so-called "VLF swap" pursuant to which the State took VLF revenues that were previously allocated to cities and counties through the Motor Vehicle License Fees Account ("MVLFA") and replaced these revenues with property tax revenues that were drawn from the Educational Revenue Augmentation Fund ("ERAF") and paid to the counties and cities through the Vehicle License Fee Adjustment Amount ("VLFAA").

In recognition of the County's pledge of VLF revenues to secure the repayment of certain County bankruptcy debt, the Legislature enacted Assembly Bill 2115 ("AB 2115") in 1995. AB 2115's provisions allocated to the County, at the time of the VLF swap beginning in the 2004-2005 fiscal year, \$54 million in VLF each year. Both the VLFAA and the amount of actual VLF received by the County under AB 2115 were adjusted to reflect growth or losses in property taxes for VLFAA and VLF receipts.

On June 30, 2011, the Governor signed Senate Bill 89 ("SB 89"), which terminated the County's annual receipt of approximately \$49.5 million (adjusted from \$54 million) in VLF under AB 2115. The County believed the action by the State in eliminating the VLF to the County required the County's Auditor-Controller, consistent with other counties, to recalculate the property taxes that must be allocated to the County as part of the VLFAA under Revenue & Taxation Code Section 97.70. The Auditor-Controller's calculation of the VLFAA for Fiscal Year 2011-12 determined that the County should receive approximately \$73.5 million more in VLFAA compared to the prior year and the Auditor-Controller allocated such additional amounts to the County. On April 5, 2012, the California Department of Finance ("DOF") and the Chancellor of the California Community Colleges filed a lawsuit against the County under Revenue and Taxation Code Section 97.70 as a part of the VLFAA. On August 30, 2013, the Orange County Superior Court issued a judgment that required the

Auditor-Controller to calculate future VLFAA without the additional \$73.5 million adjustment in VLFAA. The judgment further required the County to repay \$148.6 million (plus interest) in VLFAA previously allocated to the County under the disputed calculation method used in Fiscal Years 2011-12 and 2012-13. On September 27, 2013, Assembly Bill 701 ("AB 701") was signed by the Governor as a legislative resolution to the dispute between the State and the County. AB 701 provides for \$53 million in annual VLFAA in lieu of the \$50 million previously provided by SB 8 X3. For additional information regarding SB 8 X3, see "General Fund Revenues - Allocation of Property Taxes" herein. AB 701 also sets forth the repayment schedule by fiscal year shown in the following table. The Board of Supervisors took action to reserve the repayment amount in the County's strategic priority reserves. The VLFAA reserve is reported in the Basic Financial Statement for Governmental Funds in the County's Comprehensive Annual Financial Report as a portion of the General Fund Assigned Fund Balance (Assigned to General Services: Operations). The following table provides the repayments of VLFAA made by the County. The final repayment of \$55 million will be made in June2019.

TABLE A-11

COUNTY OF ORANGE REPAYMENT OF VLFAA ALLOCATION UNDER AB 701 BY FISCAL YEAR

2014-15	2015-16	2016-17	2017-18	2018-19	Total
\$5,000,000	\$15,000,000	\$25,000,000	\$50,000,000	\$55,000,000	\$150,000,000

Source: County of Orange, County Budget Office.

Fiscal Year 2012 Realignment

The Fiscal Year 2011-12 State Budget Act included a Realignment Plan which transferred authority and funding responsibility for certain State programs to local governments including: court security, adult offender and parolees, public safety grants, mental health services, substance abuse treatment, child welfare programs, adult protective programs, and California Work Opportunity and Responsibility to Kids (CalWORKs). The realignment of these Public Safety and Health and Human Services programs went into effect July 1, 2011, with the exception of the funding for the realignment of adult offender and parolee populations (which is referred to as Assembly Bill 109 ("AB 109"), which went into effect October 1, 2011. AB 109 is funded by a dedicated portion of sales tax revenue and vehicle license fees per SB 89 and Assembly Bill 118 ("AB 118"). SB 89 provided revenue to counties for local public safety programs and AB 118 established a Local Revenue Fund 2011 for counties to receive revenues and appropriate funding for AB 109. The Schools and Local Public Safety Protection Act ("Proposition 30") approved by voters on November 7, 2012, among other things, guarantees the ongoing revenues redirected to counties in 2011 to fully fund public safety programs transferred as part of the Realignment Plan. The realignment of these programs was expected to have a minimal financial impact on the County as long as the programs remained fully funded by the State.

The Fiscal Year 2017-18 AB 109 allocation received by the County was \$84.8 million. The Fiscal Year 2018-19 AB 109 allocation is projected to increase by \$5.7 million to be \$90.5 million based on revised information received from the California Department of Finance. For Fiscal Year 2018-19, the County estimates the AB 109 allocation will increase by \$6 million to \$91 million. This estimate is based on the State's FY 2018-19 Budget.

Dissolution of Redevelopment Agencies

Pursuant to Assembly Bill x1 26 ("AB x1 26") (a companion bill to the Fiscal Year 2011-12 State Budget Act), redevelopment agencies were dissolved, and any net tax increment revenues remaining after

payment of redevelopment bonds debt service, other enforceable obligations and administrative costs will be distributed to cities, counties, special districts and school districts. Another companion bill, Assembly Bill x1 27 ("AB x1 27"), authorized redevelopment agencies to continue operations provided their establishing cities or counties agreed to make a specified payment to school districts and county offices of education, totaling \$1.7 billion statewide. As a result, the County Development Agency was dissolved effective February 1, 2012 and the County became the successor agency to the County Development Agency. The County is in the process of winding down the operations of the County Development Agency in accordance with the requirements of AB x1 26. The County estimates that it will receive approximately \$27.8 million in additional property tax revenue in Fiscal Year 2018-19 from the dissolution of redevelopment agencies and expects the additional revenue to continue at least at this level on an annual basis.

Sales Tax

A sales tax is imposed upon retailers for the privilege of selling tangible personal property in California. Most retail sales and leases are subject to the tax. However, exemptions have been provided for certain essentials such as food for home consumption, prescription drugs, gas delivered through main gas lines and electricity. Other exemptions provide relief for a variety of sales ranging from custom computer software to aircraft.

Currently the total state and local sales tax rate of 7.75% is imposed in the County. The breakdown of the state and local sales tax rate is as follows:

- 3.9375% imposed as a State General Fund tax;
- 0.5% dedicated to local governments (including the County) for health and social programs realignment;
- 0.5% dedicated to local governments (including the County) for public safety services ("Proposition 172 Funds");
- 1.25% local tax imposed under the Uniform Local Sales and Use Tax Law (known as the "Bradley-Burns Act"), with 0.25% dedicated to county transportation purposes and 1% for city and county general purpose use (the County receives the 1% portion of the tax for sales that occur in unincorporated areas);
- 0.5% Optional Local Sales Tax for transportation improvements ("Measure M Sales Tax"); and
- 1.0625% to fund the Local Revenue Fund 2011 for AB 109.

Recent State Impacts to the County

Fiscal Year 2018-19 In-Home Support Services Program. Effective July 1, 2017, the State established a new county In-Home Support Services ("IHSS") maintenance of effort ("MOE") structure which shifted significant costs to counties. To help mitigate the impact of this change, the State dedicated \$1.1 billion in State General Funds over four years to help offset the cost. In addition, the State made changes to 1991 Realignment whereby growth revenues are to be paid to counties in the fiscal year earned as opposed to being paid up to 18 months in arrears. However, the State also temporarily redirected the public health growth funds to the social services program to help mitigate the increases in costs. With robust realignment revenues in Fiscal Year 2017-18 and projected for Fiscal Year 2018-19, the State is anticipating only slight impacts to counties in the near term. The California State Association of Counties ("CSAC") has established a working group with includes the County of Orange to work with the new administration to address the issues and concerns. The County of Orange continues to evaluate the situation and has been proactive in controlling IHSS costs and evaluating all options to help mitigate the anticipated increase in costs.

Outstanding Long Term Debt and Lease Obligations

The County's outstanding long-term debt as of July 20, 2018 is shown in the following table.

TABLE A-12

COUNTY OF ORANGE OUTSTANDING LONG-TERM DEBT AND LEASE OBLIGATIONS

Description	Source of Repayment	Outstanding Principal Balance (July 20, 2018)	Final Maturity Date
Orange County Public Facilities Corporation Refunding Certificates of Participation (Civic Center Parking Facilities Project), 1991	General Fund	\$ 391,274	2018
County of Orange Taxable Refunding Pension Obligation Bonds, Series 1997 $A^{(1)}$	General Fund	8,219,389	2021
South Orange County Public Financing Authority Juvenile Justice Center Facility Lease Revenue Refunding Bonds, Series 2012	General Fund	5,030,000	2019
County of Orange Teeter Plan Obligation Notes, Series B	Series A Taxes	61,107,000	2018
South Orange County Public Financing Authority, Central Utility Facility Lease Revenue Bonds, Series 2016	General Fund	52,515,000	2036
SUBTOTAL- GENERAL FUND OBLIGATIONS		\$ 127,262,663	_
County of Orange, Airport Revenue Bonds, Series 2009A	Airport Revenues	\$ 55,760,000	2039
County of Orange, Airport Revenue Bonds, Series 2009B	Airport Revenues	90,415,000	2039
Successor Agency to the Orange County Development Agency (Neighborhood Development and Preservation Project) Tax Allocation Refunding Bonds, Issue of 2014	Redevelopment Property Tax Trust Fund	8,130,000	2022
Successor Agency to the Orange County Development Agency (Santa Ana Heights Project Area) Tax Allocation Refunding Bonds, Issue of 2014	Redevelopment Property Tax Trust Fund	12,900,000	2023
TOTAL		\$ 294,467,663	_
California Municipal Finance Authority Lease Revenue Bonds, Series 2017A (Orange County Civic Center Infrastructure Improvement Program - Phase I) ⁽²⁾		\$152,400,000	2047

(1) The outstanding Taxable Refunding Pension Obligation Bonds, Series 1997A were economically defeased on June 22, 2000, through the deposit with the trustee of \$175.492 million principal amount of AAA-rated debt securities issued by Fannie Mae, together with irrevocable instructions that these securities and other cash amounts and investments held by the trustee, will be used solely to retire the remaining Pension Obligation Bonds as they mature.

(2) The lease payments for the Series 2017A Bonds will become an obligation of the County upon substantial completion of Phase I and the County has taken occupancy.

Source: County of Orange, CEO Public Finance Unit.

The County's General Fund debt service payments (excluding the economically defeased Pension Obligation Bonds, Series 1997) for Fiscal Years 2018-19 through 2022-23 is shown in the following table.

TABLE A-13

COUNTY OF ORANGE GENERAL FUND DEBT SERVICE

Description	Fiscal Year 2018-19	Fiscal Year 2019-20	Fiscal Year 2020-21	Fiscal Year 2021-22	Fiscal Year 2022-23
Orange County Public Facilities Corporation Refunding Certificates of Participation (Civic Center Parking Facilities Project), 1991	\$2,600,000	\$0	\$0	\$0	\$0
South Orange County Public Financing Authority Juvenile Justice Center Facility Lease Revenue Refunding Bonds, Series 2012	5,281,500	0	0	0	0
County of Orange Teeter Plan Obligation Notes, Series B ⁽¹⁾	0	0	0	61,107,000	0
South Orange County Public Financing Authority, Central Utility Facility Lease Revenue Bonds, Series 2016	4,487,000	4,486,000	4,487,000	4,489,250	4,486,250
TOTAL GENERAL FUND DEBT SERVICE	\$ 12,368,500	\$ 4,486,000	\$ 4,487,000	\$ 65,596,250	\$ 4,486,250
California Municipal Finance Authority Lease Revenue Bonds, Series 2017A (Orange County Civic Center Infrastructure	\$0	\$0	\$3,095,263	\$3,393,370	\$3,392,605

Improvement Program - Phase I)⁽²⁾

(2) The lease payments for the Series 2017A Bonds will become an obligation of the County upon substantial completion of Phase I and the County has taken occupancy. Debt service amount reflects General Fund portion of approximately 34% (based on estimated occupancy) of total debt service.

Source: County of Orange, CEO Public Finance Unit.

Short Term Debt

For the past several years, the County has issued 18-month pension obligation bonds to finance the prepayment of its contributions to its retirement system in order to secure a discount. On January 12, 2018, the County issued its Taxable Pension Obligation Bonds, 2018 Series A (the "2018 Series A Bonds") in the amount of \$375.3 million. The outstanding balance as of June 30, 2018 was \$375.3 million. The 2018 Series A Bonds will mature on April 30, 2019. The 2018 Series A Bond proceeds were combined with \$30.1 million in contributions from County departments to prepay the County's Fiscal Year 2018-19 pension obligation. The OCERS Board of Retirement approved a discount rate of 4.5% for the pension prepayment in connection with the issuance of the 2018 Series A Bonds. The discount, combined with the interest and issuance costs, resulted in a net savings of \$9.7 million to the County.

In Fiscal Year 2012-13, \$3.9 million was borrowed from the OC Waste & Recycling Department's solid waste enterprise fund for costs associated with the upgrade of various information technology projects. The amount borrowed was fully repaid over five years in equal principal installments including interest at the Treasurer commingled pool rate. The Fiscal Year 2018-19 County budget includes \$23.5 million in additional internal borrowing for the Probation Department's multi-purpose gym and Sheriff-Coroner Musick jail projects. The repayment of these projects is required over a three year period.

⁽¹⁾ Represents scheduled debt service. Historically, the County has voluntarily retired portions of the Teeter Notes throughout the year using delinquent tax revenues associated with the Teeter Plan. In July of each year, the County has issued additional Teeter Notes to fund the distribution to Participating Agencies under the Teeter Plan. The Teeter Notes mature on July 30, 2021. For additional information, see "Teeter Plan Notes" herein.

The County has not issued Tax and Revenue Anticipation Notes since 2011, as sufficient cash is available due to an increased General Fund reserve balance.

Capital and Operating Lease Obligations

The County is the lessee under a number of capital leases in effect with respect to real property and equipment used by the County. For additional information, see Note 12 in the Notes to the County's Basic Financial Statements Fiscal Year Ended June 30, 2017 in Appendix B of this Official Statement.

Civic Center Master Plan

On April 25, 2017, the Board of Supervisors approved the County of Orange Civic Center Facilities Strategic Plan. The Facilities Strategic Plan involves the approximately 11 acre County "superblock" (bounded by Ross Street, Civic Center Drive, Broadway and Santa Ana Boulevard), as well as County satellite buildings within the vicinity of the Civic Center. Key goals of the plan are to improve the delivery of County services to the community by grouping similar and related services; to improve efficiencies through these departmental adjacencies; reduce energy costs by capitalizing on the Central Utilities Facility; and to improve space usage which are projected to result in lower long-term operating and maintenance costs for the County. To accomplish these goals, the plan anticipates the renovation of several existing facilities and the replacement of several facilities with new construction. These activities would result in a net increase of 390,000 square feet of government office uses within the Facilities Strategic Plan area. Implementation would occur in four phases over approximately 18 years. Phase I of the Facilities Strategic Plan was financed with \$152.4 million California Municipal Finance Authority Lease Revenue Bonds, Series 2017A. The Phase I project is currently in process with an expected completion date in January 2020. There are no contracts yet in place for future phases beyond Phase II. See "THE PROJECT" in the forepart of this Official Statement for Phase II.

Overlapping Debt and Debt Ratios

The County contains numerous municipalities, school districts, and special purpose districts such as water and sanitation districts, which have issued indebtedness that is repaid out of tax revenues. Set forth in the following table is a direct and overlapping debt report (the "Debt Report") prepared by California Municipal Statistics, Inc. as of June 30, 2018. The Debt Report is included for general information purposes only. Neither the County nor the underwriter makes any representations as to its completeness or accuracy. Some of the issues may be payable from self-supporting enterprises or revenue sources other than property and other taxes.

TABLE A-14

COUNTY OF ORANGE DIRECT AND OVERLAPPING DEBT As of June 30, 2018

2017-18 Assessed Valuation: \$563,662,044,297 (includes unitary utility valuation)

OVERLAPPING TAX AND ASSESSMENT DEBT: The Metropolitan Water District of Southern California Coast Community College District North Orange County Joint Community College District Rancho Santiago Community College District and School Facilities Improvement District No. 1	<u>% Applicable</u> 20.333% 99.999 97.715 100.	Debt 6/30/18 \$ 12,321,798 781,326,691 201,345,667 368,129,249	
Unified School Districts Anaheim Union High School District Fullerton Joint Union High School District Huntington Beach Union High School District Elementary School Districts Irvine Ranch Water District Improvement Districts	0.146-100. 100. 91.701 100. 100. 100.	1,817,695,594 200,528,955 155,584,502 187,014,998 621,258,502 568,600,000	
Moulton-Niguel Water District Improvement Districts Santa Margarita Water District Improvement Districts Cities Orange County Community Facilities Districts Other Community Facilities Districts	100. 100. 100. 100. 100. 100.	2,830,000 2,830,000 74,380,000 28,030,000 481,326,990 1,970,302,288	
City and Special District Special Assessment Bonds County 1915 Act Bonds TOTAL OVERLAPPING TAX AND ASSESSMENT DEBT OTHER DIRECT AND OVERLAPPING DEBT:	100. 100.	834,875,839 <u>41,815,000</u> \$8,347,366,073	
Orange County General Fund Obligations (1) (2) Orange County Pension Obligation Bonds Orange County Office of Education Certificates of Participation Coast Community College District Certificates of Participation Unified School District Certificates of Participation High School District Certificates of Participation Elementary School District Certificates of Participation City of Anaheim General Fund Obligations Other City General Fund Obligations Moulton-Niguel Water District Certificates of Participation TOTAL GROSS OTHER DIRECT AND OVERLAPPING DEBT Less: City of Anaheim supported obligations TOTAL NET OTHER DIRECT AND OVERLAPPING DEBT	100. % 100. 100. 100. 99.999 0.146-100. 91.701-100. 100. 100. 100. 100. 100. 100. 100. 100.	$\begin{array}{c c} $ 210,347,000 \\ 383,564,389 \\ 13,990,000 \\ 3,284,967 \\ 372,016,235 \\ 119,854,798 \\ 106,498,253 \\ 606,340,522 \\ 433,345,008 \\ \underline{} \\ $	
OVERLAPPING TAX INCREMENT DEBT (Successor Agencies): Anaheim Redevelopment Agency Brea Redevelopment Agency Westminster Redevelopment Agency Fullerton Redevelopment Agency Buena Park Redevelopment Agency Other Redevelopment Agencies TOTAL OVERLAPPING TAX INCREMENT DEBT GROSS COMBINED TOTAL DEBT NET COMBINED TOTAL DEBT	100. % 100. 100. 100. 100. 100.	\$156,455,000 135,446,668 114,655,000 78,595,000 72,160,000 407,928,707 \$965,240,375 \$11,634,112,620 \$11,027,772,098	(3)

(1) Excludes Teeter Obligation Notes, see Table A-12

(2) Includes CMFA Lease Revenue Bonds, Series 2017A – Phase I of the Civic Center Master Plan

(3) Excludes tax and revenue anticipation notes, enterprise revenue, mortgage revenue and non-bonded capital lease obligations. Qualified Zone Academy Bonds are included based on principal due at maturity.

Ratios to 2017-18 Assessed Valuation:

Katos to 2017-10 Assessed Valuation.	
Total Direct and Overlapping Tax and Assessment Debt	1.48%
Combined Direct Debt (\$593,911,389)	0.11%
Gross Combined Total Debt	2.06%
Net Combined Total Debt	1.96%

Ratios to Redevelopment Successor Agencies Incremental Valuation (\$61,059,615,022):Total Overlapping Tax Increment Debt1.58%

Source: California Municipal Statistics, Inc.

Attachment N

COUNTY RETIREMENT SYSTEM

General

The County contributes to OCERS, which was established in 1945 pursuant to the County Employees Retirement Law of 1937 (California Government Code § 31450 et seq.) (the "Retirement Law"). OCERS is an independent, defined-benefit retirement plan in which member employees of the County, Orange County Superior Court, and certain cities and special districts within the County participate. Participating entities, including the County, share proportionally in all risks and costs, including benefit costs. OCERS is governed by the Board of Retirement (the "Retirement Board"), which is independent of the Board of Supervisors, although the Board of Supervisors appoints four members of the nine-member Retirement Board. In addition, the Treasurer sits as an ex-officio member of the Retirement Board, as required by the Retirement Law. The California Constitution vests the Retirement Board with sole and exclusive responsibility over OCERS, including without limitation, the assets of OCERS, the administration of OCERS and the actuarial services provided to OCERS. Members of the Retirement Board must discharge their duties solely in the interest of and for the exclusive purposes of providing benefits to participants and their beneficiaries, minimizing employer contributions, and ensuring reasonable expenses of OCERS. The Retirement Board's duty to OCERS participants and their beneficiaries takes precedence over any other duty. The Retirement Board also determines the annual contributions required of the County and other participating local governmental entities to fund OCERS.

OCERS practice has been to determine contribution rates by conducting an actuarial valuation on an annual basis as of each December 31. The County and other participating entities begin making contributions attributable to each annual valuation eighteen months after the respective valuation date. County payments represent approximately 75% of the payments into OCERS. The Retirement Law requires the Board of Supervisors to annually make budgetary appropriations for the purpose of making required County contributions to OCERS.

OCERS provides a "defined benefit" pension to eligible members (all regular full-time employees or part-time employees scheduled to work 20 hours or more per week) upon retirement (OCERS also provides certain disability and death benefits). Benefits formulas authorized under the Retirement Law are typically adopted through labor contracts negotiated between the County and employee bargaining units. Members' annual benefits are determined by multiplying a specified percentage of pay times years of service. The product constitutes the member's retirement benefit. In addition, benefit formulas include an age at which the member can retire and begin to receive the full amount of his benefit. There are various benefit formulas depending on the employee's hire date and bargaining unit. The majority of General members hired prior to January 1, 2013 are enrolled in a 2.7% at age 55 retirement formula. Due to the passage of the Public Employees' Pension Reform Act ("PEPRA") of 2013, most new General members hired on or after January 1, 2013 are enrolled in a 3% at age 50 retirement formula. As a result of PEPRA, new Safety members hired on or after January 1, 2013 are enrolled in a 2.7% at age 57 retirement formula.

Actuarial Valuation and Funding Methodology

OCERS' actuarial valuations determine, as of the date of the calculation (e.g., December 31, 2017), the funding (contributions) required for the Fiscal Year commencing eighteen months from the valuation date, based substantially upon analysis of the prior year's plan experience. OCERS uses the Entry Age Normal Actuarial Costs Method for funding. The actuary employs a series of economic and demographic assumptions including expected return on invested assets, the assumed future pay increases for current employees, assumed rates of disability, the assumed retirement ages of active employees, the assumed marital status at retirement, and the post-employment life expectancies of retirees and beneficiaries, contributions to OCERS, inflation, and other factors. All OCERS actuarial assumptions are subject to change at the direction of the Retirement Board.

See "Recent Changes to Actuarial Assumptions" below. Assumptions used in the December 31, 2017 actuarial valuation include:

Investment Rate of Return	7.00%
Inflation Rate	2.75% per annum
Cost of Living Adjustments	2.75% per annum
Real Across the Board Salary Increase	0.50%
Projected Salary Increases	4.25% to 12.25% for General Members; 4.75% to
	17.25% for Safety Members based on Service

The valuation determines annual contribution requirements, which are expressed as a percentage of pay for each benefit formula. Employer contribution rates are comprised of both normal cost and an amount to amortize the outstanding balance of the unfunded actuarial accrued liability ("UAAL"). The "normal cost" represents the amount of contributions required to fund the cost associated to the current year of service, plus a cost of living factor. Member employees also pay a normal contribution, based on formulas specified in the Retirement Law. Additionally, certain bargaining agreements require employees to pay a portion of the UAAL on behalf of the County.

The UAAL represents the amount by which the actuarial accrued liability (the present value of projected future benefits earned by employees as of the respective valuation date) of OCERS exceeds the Actuarial Value of Assets. The Actuarial Value of Assets means the market value of assets exclusive of the unrecognized gains and losses from investment over the previous five years. The unrecognized return is equal to the difference between the actual return and the assumed return on a market value basis. The difference each year is "smoothed" by separately recognizing the difference in 20% increments over the subsequent five (5) years. The "smoothing" technique is intended to recognize market value gains and losses over time to reduce volatility in resulting contribution rates. The UAAL is owed to OCERS by all participating agencies, including the County, amortized over a period of years and once a UAAL is determined, in order to calculate required contributions, OCERS uses differing amortization periods for gains and losses depending upon the reason for such gain or loss.

In 2013, OCERS reset the UAAL amortization period combining and re-amortizing the entire outstanding balance of the December 31, 2012 UAAL over a single 20-year period. Any future changes in UAAL due to actuarial gains or losses or due to changes in assumptions or methods will be amortized over separate 20-year periods. Any changes in plan amendments will be amortized over separate 15-year periods and any change in UAAL due to early retirement incentive programs will be amortized over a separate period of up to 5 years.

December 31, 2017 Actuarial Valuation

OCERS' December 31, 2017 actuarial valuation (the "2017 Valuation") calculated UAAL as of December 31, 2017 as \$5.438 billion (County's portion is approximately \$4.4 billion), an increase of \$607.819 million from OCERS' December 31, 2016 valuation (the "2016 Valuation"). The primary contributing factor for the UAAL increase were changes in actuarial assumptions, actual contributions being less than expected, and other actuarial losses, offset somewhat by favorable investment return (after smoothing), lower than expected salary increases, lower than expected COLA increases, and additional UAAL payments by pool participants. The ratio of the Valuation Value of Assets (the Actuarial Value of Assets less certain non-valuation reserves) to Actuarial Accrued Liabilities in the 2017 Valuation decreased to 72.30% from 73.06% in the 2016 Valuation. The aggregate employer contribution rate has increased from 36.43% of payroll to 37.97% of payroll in the 2017 Valuation. For more information regarding the funding progress of OCERS, see table A-16 herein. The County would begin making contribution payments attributable to the 2017 Valuation on July 1, 2019, although it has been the County's practice to prepay these contributions in January.

Significant Changes to Actuarial Assumptions

On October 16, 2017, the Retirement Board voted to reduce the assumed investment rate of return from 7.25% to 7.00%, reduce the assumed inflation rate from 3.00% to 2.75% and implementation of generational mortality tables (to acknowledge reduced rates of mortality). The estimated increase to OCERS' UAAL due to the assumption changes is \$822 million. The Retirement Board approved a three-year phase in of the cost of the UAAL impact beginning in July 2019 and the cost impact on the normal cost are reflected in the 2017 Valuation.

OCERS' rate of return on an actuarial and market basis for the last ten years is shown in the following table.

TABLE A-15

ORANGE COUNTY EMPLOYEES' RETIREMENT SYSTEM INVESTMENT RETURNS

Year Ended December 31	Actuarial Value Investment Return	Market Value Investment Return
2008	4.23%	(20.76)%
2009	3.60	17.32
2010	5.02	10.47
2011	3.28	0.04
2012	3.49	11.92
2013	9.11	10.73
2014	7.34	4.52
2015	5.26	(0.45)
2016	6.33	8.72
2017	7.44	14.79
5-Year Average Return	7.09	7.53
10-Year Average Return	5.49	5.16

Source: Orange County Employees Retirement System Actuarial Valuation and Review December 31, 2017.

Attachment N

Table A-16 shows the funding progress for OCERS: the funding ratio and the ratio of UAAL to annual payroll. OCERS's Actuarial Value of Assets recognizes each year's asset gains or losses over a five year period, one fifth per year.

TABLE A-16

ORANGE COUNTY EMPLOYEES' RETIREMENT SYSTEM SCHEDULE OF FUNDING PROGRESS (Dollars in Thousands)

Actuarial Valuation Dec. 31	Actuarial Value of Assets ⁽¹⁾	Market Value of Assets	Actuarial Accrued Liability (AAL)	Total Unfunded Actuarial Accrued Liability (UAAL) ⁽²⁾	Actuarial Funded Ratio ⁽³⁾	Market Funded Ratio ⁽⁴⁾	Projected Covered Payroll ⁽⁵⁾	UAAL as a Percentage of Projected Payroll ⁽⁶⁾
2008	\$7,748,380	\$6,248,558	\$10,860,715	\$3,112,335	71.34%	59.45%	\$1,569,764	198.27%
2009	8,154,687	7,464,761	11,858,578	3,703,891	68.77	64.22	1,618,491	228.85
2010	8,672,592	8,357,835	12,425,873	3,753,281	69.79	68.92	1,579,239	237.66
2011	9,064,355	8,465,368	13,522,978	4,458,623	67.03	62.60	1,619,474	275.31
2012	9,469,208	9,566,659	15,144,888	5,675,680	62.52	63.17	1,609,600	352.55
2013	10,417,125	10,679,292	15,785,042	5,367,917	65.99	67.65	1,604,496	334.55
2014	11,449,911	11,428,133	16,413,124	4,963,213	69.76	69.63	1,648,160	301.14
2015	12,228,009	11,548,440	17,050,357	4,822,348	71.72	67.73	1,633,112	295.29
2016	13,102,978	12,657,330	17,933,461	4,830,483	73.06	70.58	1,759,831	274.49
2017 ⁽⁷⁾	14,197,125	14,652,521	19,635,427	5,438,302	72.30	74.62	1,811,877	300.15

⁽¹⁾ The Actuarial Value of Assets exclude assets held in the Investment Account and prepaid employer contributions. See "County General Fund Budget – Reserves" herein.

(2) Actuarial Accrued Liability minus Actuarial Value of Assets, County's December 31, 2017 portion is approximately \$4.4 billion.

⁽³⁾ Actuarial Value of Assets divided by Actuarial Accrued Liability.

⁽⁴⁾ Market Value of Assets divided by Actuarial Accrued Liability.

⁽⁵⁾ Annual payroll against which UAAL is amortized.

⁽⁶⁾ UAAL divided by Covered Payroll.

(7) Increase in UAAL in 2017 due to changes in assumptions used in the December 31, 2017 Actuarial Valuation including rate of return and inflation rate reductions and the use of generational mortality tables.

Source: OCERS Comprehensive Annual Financial Reports and actuarial valuations.

TABLE A-17

ORANGE COUNTY EMPLOYEES' RETIREMENT SYSTEM CHANGES IN FIDUCIARY NET POSITION (In Thousands)

	Years Ended December 31					
	2015	2016	2017			
Contributions Received ⁽¹⁾	\$ 859,750	\$ 870,318	\$ 896,642			
Net Investment Income (Loss)	(12,700)	1,079,787	1,977,225			
Net Securities Lending Income	1,051	1,227	1,646			
Participant's Benefits	(697,661)	(739,018)	(786,498)			
Withdrawals and Refunds	(11,857)	(13,643)	(13,866)			
Administrative Expenses	(12,565)	(16,914)	(17,051)			
Increases in Net Position Restricted for Pension and OPEB	\$ 126,018	\$ 1,181,757	\$ 2,058,098			

⁽¹⁾ Includes employer and employee pension and retiree health care contributions to OCERS (See "Post Employment Health Care Benefits" section herein for information regarding the Retiree Medical Trust held at OCERS).

Sources: OCERS Comprehensive Annual Financial Reports.

Table A-18 below shows the County's required contributions and the percentage contributed for Fiscal Years 2008-09 to 2017-18.

TABLE A-18

ORANGE COUNTY EMPLOYEES' RETIREMENT SYSTEM COUNTY CONTRIBUTIONS (Dollars in Thousands)

Year Ended June 30	County Cash Contribution	Investment Account Contribution ⁽¹⁾	Total Annual Required Contribution	Percentage Contributed
2009	\$256,531	\$36,500	\$293,031	100%
2010	279,574	11,000	290,574	100
2011	296,084	11,000	307,084	100
2012	310,736	11,000	321,736	100
2013	328,953	0	328,953	100
2014	348,597	10,000	358,597	100
2015	371,810	0	371,810	100
2016	384,133	0	384,133	100
2017	405,493	0	405,493	100
2018	433,098	0	433,098	100

⁽¹⁾ See "County General Fund Budget – Reserves" herein.

Sources: Orange County Office of Auditor-Controller.

The UAAL, the funded ratio, calculations of normal cost as reported by OCERS and the resulting amounts of required contributions by the County are "forward looking" information. Such "forward looking" information reflects the judgment of the Retirement Board and its actuaries as to the amount of assets which OCERS will be required to accumulate to fund its liabilities for future benefits over the lives of the currently active employees, vested terminated employees and existing retired employees. These judgments are based upon a variety of assumptions, one or more of which may prove to be inaccurate or may be changed in the future.

For additional information, see Note 17 in the "Notes to the Basic Financial Statements Fiscal Year Ended June 30, 2017," which appears in Appendix B of this Official Statement. Various reports for OCERS including the OCERS Comprehensive Annual Financial Report are posted from time to time on the OCERS's website, www.ocers.org. Such reports are not incorporated as part of this Official Statement.

Post Employment Health Care Benefits

Plan Description. The County of Orange Third Amended Retiree Medical Plan (the "Retiree Medical Plan") is an Other Post Employment Benefit plan ("OPEB"), intended to assist career employees in maintaining health insurance coverage following retirement from County service. The Retiree Medical Plan was established by the Board of Supervisors. The Board of Supervisors is also the authority for amending the Retiree Medical Plan. The Retiree Medical Plan is not required by the Retirement Law. Eligible retired County employees receive a monthly grant (the "Grant"), which helps offset the cost of monthly County-offered health plans and/or Medicare A and/or B premiums. The Retiree Medical Plan does not create any vested right to the benefits.

In order to be eligible to receive the Grant upon retirement, the employee must have completed at least 10 years of County service (although exceptions for disability retirements exist), be enrolled in a County sponsored health plan and/or Medicare, qualify as a retiree as defined by the Retiree Medical Plan and receive a monthly benefit payment from the OCERS. To qualify as a retiree as defined by the Retiree Medical Plan, the employee upon retirement must be at least 50 years of age or have at least 20 years of service for a safety member of OCERS or at least 30 years of service for a general member of OCERS.

The monthly Grant amount is determined by a formula that multiplies a base number by the number of years of qualifying County employment up to a maximum of 25 years. The base number for calendar year 2017 is \$22.09 (absolute dollars) per year of County service, and the maximum monthly Grant is \$552.25 (absolute dollars). The amount of the Grant is netted against the monthly health plan premium and/or reimburses Medicare premiums paid by the retiree for retiree and dependent coverage with the retiree obligated to pay the remaining balance. In no case shall the Grant exceed the actual cost to a retiree for the Qualified Health Plan and Medicare premiums.

The Grant is reduced by 50% once the retiree becomes Medicare Parts A and B eligible. Retirees who were age 65 and/or Medicare Parts A and B eligible on the date the Board of Supervisors approved the restructuring of the Retiree Medical Plan for each labor agreement are not subject to the Medicare reduction. The Grant is also reduced by 7.5% for each year of age prior to age 60 and increased by 7.5% for each year of age after age 60 up to age 70 for current employees retiring after the effective date. The effective date varies by the date the Board of Supervisors approved each labor agreement. Safety employees and disability retirements are exempt from the age adjustment.

The base number for the Grant is adjusted annually based on a formula defined in the Retiree Medical Plan document with a maximum increase/decrease of 3%. Surviving dependents of a deceased employee or retiree eligible for the Grant are entitled to receive 50% of the Grant that the employee/retiree was eligible to receive.

The Retiree Medical Plan also provides a lump sum payment to terminated employees not eligible for the Grant. The qualifying hours of service for calculation of the lump sum payment is frozen and the effective date varies by labor agreement. The frozen lump sum payment is equal to 1% of the employee's final average hourly pay (as defined in the plan) multiplied by the employee's qualifying hours of service (as defined) since the Retiree Medical Plan's effective date.

Employees represented by the American Federation of State, County and Municipal Employees ("AFSCME") who retired before September 30, 2005 are not subject to the Medicare reduction or age adjustment to the Grant. The amount of the Grant for these retirees is adjusted annually with a maximum increase/decrease of 5%. AFSCME employees who were employed on or after September 30, 2005 are not eligible for the Grant or the lump sum payment. They may participate in the County-offered health plans at their own cost if they meet the minimum plan requirements.

Employees represented by the Association of Orange County Deputy Sheriffs ("AOCDS") who were hired on or after October 12, 2007 are not eligible to participate in the Retiree Medical Plan. Service hour accruals for the Grant and lump sum calculations for employees represented by AOCDS who were hired before October 12, 2007 were frozen. A Health Reimbursement Arrangement ("HRA") plan was established to replace the Grant for new (employed after October 12, 2007) AOCDS employees, and to supplement the frozen grants for current AOCDS employees.

Employees represented by the Association of County Law Enforcement Managers ("ACLEM") who were hired on or after June 19, 2009 are not eligible for participation in the Retiree Medical Plan. Service hour accruals for the Grant calculations for Law Enforcement Management employees who were hired before June 19, 2009 were frozen. The qualifying hours of service for calculation of the lump sum payment for Law Enforcement Management employees were frozen as of June 23, 2006. A health reimbursement arrangement Plan was established to replace the Grant for new employees, and to supplement the frozen grants for current employees.

Employees represented by the Orange County Attorneys Association ("OCAA") hired on or after July 8, 2016 are not eligible for participation in the Retiree Medical Plan. A Defined Contribution Plan, Health Reimbursement Arrangement (HRA) was established to replace the Grant or Lump Sum for all active OCAA employees.

Effective January 1, 2008, health insurance premium rates were separated by active and retired employees except for employees represented by AOCDS. Effective July 1, 2008, retiree health insurance premium rates for retired employees enrolled in the AOCDS health plans will be 10% higher than active employees. See "*Retired Employees Association of Orange County, Inc. v. County of Orange*" herein.

Funding Policy. Prior to Fiscal Year 2007-08, the County paid Retiree Medical Plan liabilities on a "pay-as-you-go" basis from a combination of County contributions and certain excess reserves from OCERS. In order to more adequately fund benefits under the Retiree Medical Plan, on June 19, 2007, the Board of Supervisors adopted the County of Orange Retiree Medical Trust (the "115 Trust") effective July 2, 2007. The 115 Trust is a trust under Section 115 of the Internal Revenue Code. In addition, the County and OCERS have entered into agreements for OCERS to establish an Internal Revenue Code Section 401(h) Trust (the "401(h) Trust") and to invest monies and pay benefits from the 401(h) Trust (except for the lump sum payment). The County has deposited the full Annual Required Contribution ("ARC") into the 401(h) Trust beginning in Fiscal Year 2007-08 and intends to contribute the full ARC in future years. The costs to administer the Trust are paid from the Trust.

The County is currently contributing 0.3% for AFSCME, 0.4% for OCAA, 5.0% for AOCDS, 8.1% for law enforcement management, 4.4% for the Probation Department safety personnel, and 3.9% of payroll for all other labor groups, which is the ARC for those groups. Additionally, effective July 10, 2015, contributions by employees represented by AOCDS and ACLEM hired before April 4, 2009 were reduced from 2.6% to 1.6% of base, while employees hired on or after April 4, 2009 were reduced from 1% to 0%.

Actuarial Methods and Assumptions. The County contracts with an outside actuarial consultant, Bartel Associates, LLC ("Bartel"), to prepare the bi-annual actuarial valuation in conformance with GASB Statements

No. 43 and 45. The County received a June 30, 2017 valuation for Fiscal Years 2018-19 and 2019-20 for the Retiree Medical Plan. Among the actuarial methods and assumptions used in the 2017 valuation are:

- The entry age normal actuarial cost method.
- Closed period amortization of the June 30, 2008 UAAL over 29 years as a level percentage of payroll (20 years remaining as of June 30, 2018).
- A 7.00% long-term expected rate of return on funds held in the Trust.
- A 3.25% per annum payroll increase assumption.
- A 2.75% per annum general inflation rate assumption.
- The assumed annual increases in the monthly Grant of 5% for American Federation of State, County and Municipal Employees ("AFSCME") employees and 3% for non-AFSCME employees. The healthcare trend (the growth in healthcare costs) was assumed to be greater than or equal to the Grant through 2021 and beyond. Therefore, healthcare trend rates have little impact on the projected benefits and UAAL due to the 3% (or 5% for AFSCME) cap on Grant annual increase.
- There are an estimated 26,494 participants in the plan of which 18,162 are employees, 31 are deferred retirees, and 8,301 are retirees.

The 2017 valuation reports a UAAL of \$406.7 million for the Retiree Medical Plan for the Fiscal Year ended June 30, 2017. This is a reduction from the \$1.4 billion UAAL reported in the 2005 valuation. The reduction in UAAL is due to the restructuring of the Retiree Medical Plan benefits, including but not limited to splitting of active employees and retirees into separate pools for premium rate setting purposes and the establishment of the 401(h) Trust to achieve a higher rate of return on assets.

TABLE A-19

Actuarial Valuation as of June 30 ⁽¹⁾	Actuarial Value of Plan Assets	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Annual Covered Payroll	UAAL as a Percentage of Covered Payroll (a(d)
	(a)	(b)	(b-a=c)	(a/b)	(d)	(c/d)
2009	\$94,110	\$456,005	\$361,895	20.6%	\$1,267,427	28.6%
2011	116,804	528,639	411,835	22.1	1,273,636	32.3
2013	155,702	573,763	418,061	27.1	1,217,052	34.4
2015	217,556	614,500	396,944	35.4	1,188,727	33.4
2017	273,936	680,652	406,716	40.2	1,277,714	31.8

ORANGE COUNTY RETIREE MEDICAL PLAN SCHEDULE OF FUNDING PROGRESS (Dollars in Thousands)

¹⁾ Valuation reports are received every other year.

Source: 2009 through 2015, Orange County Comprehensive Annual Financial Reports. 2017, actuary valuation.

Annual OPEB Cost and Net OPEB Obligation/Asset. The Annual OPEB cost is the OPEB expense that the County reports in its annual financial statements. It equals the ARC with certain adjustments if the County's actual contributions differ from the ARC in prior years. The net OPEB obligation/asset is the cumulative sum of the difference between Annual OPEB cost and the amounts actually contributed to the plan. The following table shows the calculation of the net OPEB asset for Fiscal Years 2012-13 through 2016-17.

TABLE A-20

ORANGE COUNTY RETIREE MEDICAL PLAN CALCULATION OF OPEB ASSET (In Thousands)

	2012-13	2013-14	2014-15	2015-16	2016-17
Annual Required Contribution	\$ 42,713	\$ 43,298	\$ 44,921	\$ 44,368	\$ 45,921
Interest on Net OPEB Obligation	(2,608)	(3,030)	(3,043)	(3,470)	(3,456)
Amortization of Net OPEB Obligation	2,392	2,868	2,976	3,541	3,666
Annual OPEB Cost	42,497	43,136	44,854	44,439	46,122
Contributions Made	(48,336)	(50,060)	(41,181)	(42,490)	(47,853)
Decrease/(Increase) in Net OPEB Asset	(5,839)	(6,924)	3,673	1,949	(1,731)
Net OPEB Obligation/(Asset), Beginning of year	(35,966)	(41,805)	(48,729)	(45,056)	(43,107)
Net OPEB Obligation/(Asset), End of year	\$ (41,805)	\$ (48,729)	\$ (45,056)	\$ (43,107)	\$ (44,838)

Sources: Orange County Comprehensive Annual Financial Reports dated June 30, 2013 through June 30, 2017.

Certain changes to the Retiree Medical Plan and the methodology by which a retiree health plan premiums are determined are being judicially challenged by a class action of County retirees. See "Gaylan Harris, et al. v. County of Orange" herein.

Insurance

The County has maintained a formal risk management program since the mid 1970's. The functions of CEO Risk Management include risk identification, avoidance, prevention, transfer, mitigation and financing programs. Risk financing is achieved through both self-insurance (risk retention) programs and the purchase of commercial insurance. Claims and litigation management also includes subrogation cost recovery activities.

Resources are budgeted in the Workers' Compensation Internal Service Fund and the Property and Casualty Risk Internal Service Fund. These internal service funds pay program costs including losses, expenses and administration costs. The cash reserves held in these internal services funds are retained for the payment of current and future costs. Actuarial studies are performed annually to determine the funding requirements for these activities.

Commercial insurance coverage is purchased for the County's property and for certain specialized liability exposures, including those related to airport, aircraft and watercraft operations. Additional coverages include but are not limited to earthquake, crime policies, cyber liability, notary bonds, and excess insurance for liability exposures. General and auto liability exposures are self-insured up to \$5 million. Excess liability insurance provides up to an additional \$100 million in liability coverage. Workers' Compensation is self-insured up to \$20 million. Various risk control techniques, including employee accident prevention training and regular work-site inspections, have been established to minimize losses.

Litigation Management

The Office of County Counsel generally represents the County's interests in lawsuits involving actions of the Board of Supervisors, County employees or agents of the County. These actions include employment, environmental and land use, contractual obligations, inverse condemnation and property tax refunds. Legal matters controlled by the CEO's Office of Risk Management are assigned to a panel of lawyers and law firms selected by the Board of Supervisors following a recommendation by the Office of Risk Management. There are a number of lawsuits pending against the County which, depending on their outcome, may have financial

impacts on the County. The County believes however, that the aggregate liability it might incur as a result of adverse decisions in such cases will not have a material adverse effect on the County's ability to make Base Rental Payments in amounts sufficient to pay the principal of and interest on the Bonds as described in this Official Statement.

Retired Employees Association of Orange County, Inc. v. County of Orange

In late 2006, the Board of Supervisors approved agreements with a number of employee bargaining units addressing the County's Retiree Medical program. These changes included, but were not limited to, separately pooling current employees and retirees for the purposes of health premium setting beginning in 2008, reducing the maximum annual adjustment in the program's Grant to 3% beginning in 2008, and reducing the Grant by 50% for retirees eligible for Medicare no sooner than late 2007.

On November 5, 2007, the Retired Employee's Association of Orange County ("REAOC") filed a complaint in the United States District Court for the Central District of California contesting the splitting of the pool for purposes of determining health insurance premiums.

On August 13, 2012, the District Court granted summary judgment in favor of the County. On February 13, 2014, the Ninth Circuit affirmed the District Court's decision, effective April 9, 2014, and the case was dismissed. The Ninth Circuit's ruling became final on June 30, 2014.

Gaylan Harris, et al. v. County of Orange

This case was filed as a class action on behalf of County retirees on January 22, 2009 by a retired employee. The issues and claims in *Harris* are, for the most part, similar to those raised in the *REAOC* matter described above. *Harris* includes the claims raised in *REAOC*, and, in addition, seeks monetary damages for alleged lost benefits, challenges changes to the Retiree Medical Grant program, which is a monthly premium subsidy, and asserts that splitting the pool violated the age-discrimination provisions of California's Fair Employment and Housing Act.

In June 2013, the Court entered a judgment in the County's favor. Plaintiffs appealed the Court's decision to the Ninth Circuit. Oral argument was heard in February 2014. The Ninth Circuit has yet to rule on the case. The Clerk estimated that a decision would be rendered by December 4, 2017. However, Judge Pregerson, who was on the Ninth Circuit panel, passed away in November, 2017. A new judge was assigned to the case and it is unknown when a decision of the reconstituted panel will be rendered.

It is unclear what the full impact of the *REAOC* decision will be on the *Harris* case. Given the ruling in *REAOC*, the County expects the court in Harris will require dismissal of the overlapping contractual and constitutional claims. However, it is difficult to predict the County's potential liability in *Harris*.

Orange County Catholic Worker et al. v. Orange County et al.

On January 29, 2018, the Orange County Catholic Workers and seven homeless individuals ("Plaintiffs") filed a complaint in federal court against the County, and the cities of Costa Mesa and Orange ("Defendants"), asking the Court to enjoin Defendants from enforcing any ordinances or statutes that prevent trespassing or camping in the Santa Ana Riverbed because the Defendants failed to provide reasonable alternative housing. On February 6, 2018, Judge David O. Carter granted the Plaintiffs' request for a temporary restraining order and commenced proceedings the next week. Judge Carter lifted the restraining order on February 20, 2018, when the parties reached an agreement that temporarily addressed the Plaintiffs' concerns.

On April 26, 2018, the City of Santa Ana filed a Cross-Complaint against the County and all cities in the County claiming that the City of Santa Ana has been disproportionally burdened by the homeless population and had incurred expenses. To date, none of the named cities have been officially served with the Cross-

Complaint.

On July 26, 2018, the Defendants were served a First Amended Complaint ("FAC"). The FAC added a new plaintiff who seeks to represent a class of individuals who had lived in the Santa Ana Riverbed or the Santa Ana Civic Center in 2018 and allegedly had been harmed by the Defendants because of their status as homeless persons. The new plaintiff also seeks to represent a group who suffer from a serious and persistent mental illness and were removed from a named full service partnership program. Plaintiffs estimate that the members of the class, if approved by the court, will exceed 1,500 people. The FAC also alleges that the recent seasonal closure of the armories in the County has resulted in further harm to homeless persons. The FAC added additional causes of action for violations under the U.S. Constitution and federal and state housing and disability laws.

In the FAC, Plaintiffs seek monetary damages in an unspecified amount plus attorneys' fees and orders enjoining the Defendants from removing Plaintiffs from specified programs and placements without due process of law. Plaintiffs request that the Defendants be prevented from enforcing their anti-camping and loitering ordinances and be required to set up locations where Plaintiffs may access services. Plaintiffs ask for an order enjoining the issuance of all development permits in the Defendants' jurisdictions, until compliance with the Housing Accountability Act is met. It is too premature to predict what financial liability, if any, Defendants might incur in this litigation.

The parties and cities in the County have discussed building additional homeless shelters and housing to settle the litigation. The County may agree to contribute to or participate in the construction of additional shelters or housing but does not believe that the General Fund will be meaningfully impacted because the County would likely use state funds dedicated to low-income housing and mental health treatment to fund this housing and related services. If the case does not settle, the parties will engage in discovery and start preparing for trial.

Ramirez et al. v. The County of Orange

On February 7, 2018 the People's Homeless task force and seven allegedly disabled homeless individuals ("Plaintiffs") brought action in federal court claiming the County violated the United States and California Constitutions, the American with Disabilities Act and the Civil Rights Act because the Plaintiffs were removed from the Santa Ana Riverbed without reasonable alternative housing. On March 26, 2018, Plaintiffs amended their complaint to include additional violations of federal and state disability and housing laws.

Plaintiffs seek monetary damages in an unspecified amount, attorney's fees, declaratory and injunctive relief. It is too premature to predict liability at this stage. The County has obtained an extension to respond to the Complaint until October 22, 2018. This case has been deemed related to the *OC Catholic Worker* case. If the case does not settle, the parties will engage in discovery and start preparing for trial.

People for the Ethical Operation of Prosecutors and Law Enforcement (P.E.O.P.L.E.), et al. v. Rackauckas, et al.

On April 13, 2018, plaintiffs P.E.O.P.L.E. (a purported association of Orange County residents) and three individuals (collectively "Plaintiffs") filed suit in state court against District Attorney Anthony J. Rackauckas and Orange County Sheriff Sandra Hutchens ("Defendants"). Plaintiffs are represented by offices of the American Civil Liberties Union ("ACLU") and the law firm of Munger, Tolles & Olson. The Complaint arose out of two high-profile murder cases, *People v. Scott Dekraai* and *People v. Wozniak*, and alleges that the Defendants ran an illegal jailhouse informant program that caused civil rights violations under both the U.S. and California Constitutions.

Plaintiffs do not seek monetary damages, but rather, only prospective relief such as a declaratory judgment, permanent injunctions and writs of mandate; they have requested attorney fees and the appointment of a monitor, which, if Plaintiffs prevail, could result in costs to the County parties.

Heritage Fields El Toro, LLC v. County of Orange Sacramento Superior Court Case

City of Irvine v. County of Orange Sacramento Superior Court Case

These matters arise out of the County's November 14, 2017 approval of the El Toro 100-Acre Parcel Development Plan Project and related EIR certification. The Development Plan is an administrative framework for a proposed mixed used development of County property within the political boundaries of the City of Irvine. In December 2017, the County was served with separate Complaints and Petitions for Writ of Mandamus from the City of Irvine ("Irvine") and Heritage Fields El Toro, LLC ("Heritage Fields") seeking to halt the County's development of the property as proposed. Lowe Enterprises Real Estate Group is named as the real party in interest. Compensatory and punitive damages and attorney fees are also sought in an unspecified amount.

Both actions have been transferred to Sacramento County Superior Court, and are currently pending before Judge Allen Sumner. Both Heritage Fields and Irvine have filed Government Claims, with the latter asserting significant damages. Assessment of liability is premature, as litigation is still in early stages, the County has not commenced development, and any claim of damages is subject to proof at trial. Further, should the County decide not to pursue development, or to pursue other uses for the property, to the extent there exists potential liability for damages, that liability could be significantly reduced or eliminated.

City of Irvine v. County of Orange **Orange County Superior Court**

On July 5, 2018, the City of Irvine ("Irvine") filed and subsequently served on the County a Petition for Writ of Mandate and Complaint regarding the June 5, 2018 approval of the West Alton Parcel Development Plan project. Lowe Enterprises Real Estate Group is named as the real party in interest.

Irvine seeks a writ of mandate for CEQA violations, declaratory and injunctive relief, damages, in an unspecified amount, for breach of contract, litigation costs, and attorneys' fees. After filing its lawsuit, the City of Irvine filed a Government Claim asserting significant damages. Assessment of liability is premature, as litigation is still in early stages, the County has not commenced development, and any claim of damages is subject to proof at trial. Further, should the County decide not to pursue development, or to pursue other uses for the property, to the extent there exists potential liability for damages, that liability could be significantly reduced or eliminated.

COUNTY INVESTMENT POLICY

The Treasurer is granted the authority to deposit and invest County and County agency funds under the Treasurer's control pursuant to California Government Code Section 27000 et seq. and Section 53600 et seq. and certain actions of the Board of Supervisors. Additionally, community college and school districts located in the County are required to deposit their moneys with the Treasurer pursuant to the California Education Code. The deposits of funds from other districts and local agencies may be invested with the Treasurer pursuant to a procedure established by California Government Code Section 53684 and other statutory provisions.

The total investment responsibility of the Treasurer as delegated by the Board of Supervisors includes: the Orange County Investment Pool (the "County Pool") that includes the Voluntary participants' funds, the Orange County Educational Investment Pool (the "Educational Pool"), the John Wayne Airport Investment Fund, and various other small non-Pooled investment funds. The investment practices and policies of the Treasurer are based on compliance with State law and prudent money management. The primary goal is to invest public funds in a manner which will provide maximum security of principal invested with secondary emphasis on providing adequate liquidity to Pool Participants and lastly to achieve a market rate of return within the parameters of prudent risk management while conforming to all applicable statutes and resolutions governing the investment of public funds.

The Treasurer established three Money Market Funds: the Orange County Money Market Fund, the Orange County Educational Money Market Fund, and the John Wayne Airport Investment Fund, which all are invested in cash-equivalent securities and provide liquidity for immediate cash needs. On March 6, 2017, Standard & Poor's reaffirmed their highest rating of AAAm Principal Stability Fund Ratings for the Orange County Money Market Fund and Orange County Educational Money Market Fund. These pools are not registered with the SEC. The Treasurer also established the Extended Fund, which is for cash needs between one and five years. The County Pool is comprised of the Orange County Money Market Fund and portions of the Extended Fund. The Educational Pool is comprised of the Orange County Educational Money Market Fund and portions of the Extended Fund. The Board of Supervisors approved the 2018 Investment Policy Statement on November 14, 2017. A copy of the 2018 Investment Policy Statement ("IPS") is located at ocgov.com/ocinvestments.

The maximum maturity of any investment in the Orange County Money Market Fund and the Orange County Educational Money Market Fund is 13 months, with a maximum weighted average maturity of 60 days. The maximum maturity of any investment in the John Wayne Airport Investment Fund is 15 months, with a maximum weighted average maturity of 90 days. The maximum maturity of the Extended Fund is 5 years, with an effective duration not to exceed that of a leading 1-3 year index +25%. The investments in the pools are marked to market daily to determine the value of the pools. To further maintain safety, adherence to an investment strategy of purchasing only top-rated securities and diversification and maturities, as well as maintenance of internal controls for proper accounting and reporting, compliance, document safekeeping, collateralization, and qualified broker-dealers is required.

TABLE A-21

Type of Investment	CA Gov Code % of Funds Permitted	Orange County IPS	CA Gov Code Maximum Final Maturity	Orange County IPS Maximum Final Maturity (All Pooled Funds Except Short-Term Funds)	Orange County IPS Maximum Final Maturity (Short- Term Fund)
U.S. Treasury Securities	100%	100%	5 Years	5 Years	397 Days
U.S. Government Agency Securities (GSEs)	100%	100% Total, no more than 50% in one issuer excluding securities with final maturities of 30 days or less	5 Years	5 Years	397 Days
Municipal Debt	100%	30% Total, no more than 5% in one issuer except 10% - County of Orange5 Years		5 Years	397 Days
Medium-Term Notes	30%	30% Total, no more than 5% in one issuer	5 Years	3 Years	397 Days
Bankers Acceptances	40%, 30% of a single issuer	40% Total, no more than 5% in one issuer	180 Days	180 Days	180 Days
Commercial Paper	40%, 10% of a single issuer	40% Total, no more than 5% in one issuer	270 Days	270 Days	270 Days
Negotiable Certificates of Deposits	30%	30% Total, no more than 5% in one issuer	5 Years	3 Years	397 Days
State of California Local Agency Investment Fund	\$65 million per account	\$65 million per pool	N/A	N/A	N/A
Repurchase Agreements	100%	20% Total, no more than 10% in one issuer	1 Year	1 Year	1 Year
Money Market Mutual Funds	20%	20% Total	N/A	N/A	N/A
Investment Pools	100%	20% Total, no more than 10% in one pool	N/A	N/A	N/A
Supranationals	30%	30% Total, no more than 5% in one issuer	5 Years	5 Years	397 Days

AUTHORIZED INVESTMENTS

Source: Orange County Treasurer-Tax Collector.

The IPS expressly prohibits leverage, reverse repurchase agreements, structured notes, structured investment vehicles ("SIV"), or any investment commonly considered a derivative instrument or any Money Market Mutual Funds that do not maintain a constant Net Asset Value ("NAV"). Examples of structured notes include inverse floaters, leveraged floaters, structured certificates of deposit, and equity-linked securities. This includes all floating rate, adjustable rate, or variable rate securities in which a change in interest rates or other variables that can reasonably be foreseen to occur during their term would result in their market value not returning to par at the time of each interest rate adjustment.

Rating Restrictions

- All short-term debt purchased within the money market funds shall have a rating of A-1/P-1/F1 or better from any two of the Nationally Recognized Statistical Ratings Organizations ("NRSRO") and not less than the aforementioned. Split ratings are not allowed, i.e. A-1/P-1/F2 or similar. An issuer of short-term debt must have no less than an "A" rating on long-term debt, if any.
- All long-term debt purchased within the money market funds or with remaining maturities of 397 days or less shall be rated by at least two NRSROs and have obtained no less than an "A" rating by any. All long-term debt purchased in the Extended Fund with maturities longer than 397 days shall be rated by at least two NRSROs and have obtained no less than an "AA" rating by any. If any issuer of long-term debt has a short-term rating, then it may not be less than A-1/SP-1 or P-1/MIG1 or F1 and should be rated by two NRSROs.
- Issuing Municipalities must have a short-term rating of not less than A1/P1 and a long-term rating of not less than an "A" from the NRSROs, and two NRSRO ratings of "A" or better are required unless they have a single NRSRO rating of AA-/AA3 or better.
- U.S. Government obligations as defined in Table A-21 above are exempt from the aforementioned credit ratings requirements.
- Municipal debt issued by the County of Orange is exempt from the credit rating requirements listed above.
- Supranational securities eligible for investment shall be rated "AA" or better from at least two NRSROs.
- Any issuer that has been placed on "Credit Watch-Negative" by a NRSRO will be placed on hold and current holdings reviewed for possible sale within a reasonable period of time unless the issuer has (a) an A-1+ or F1+ short term rating; or (b) at least an AA or Aa2 long-term rating and also approved in writing by the Treasurer prior to purchase. If any issuer is placed on "Credit Watch-Negative" by a NRSRO, all related entities, including parent and subsidiaries, will also be placed on hold and subject to the above requirements.

On December 19, 1995, pursuant to the Government Code, the Board of Supervisors established the Treasury Oversight Committee. The Treasurer nominates and the Board of Supervisors confirms the public members of the Treasury Oversight Committee, which is currently comprised of the CEO, the Auditor-Controller, the County Superintendent of Schools and four public members, a majority of which is required to have expertise in public finance.

Pursuant to the IPS, monthly, quarterly, and annual reports (in compliance with Government Code Sections 53607, 53646, and 27134) will be submitted to the Treasury Oversight Committee, the Pool Participants, the CEO, the Director of Auditor-Controller Internal Audit, the Auditor-Controller, and the Board of Supervisors. These reports will contain sufficient information to permit an informed outside reader to evaluate the performance of the investment program and will be in compliance with Government Code. In accordance with GASB 31 and GASB 40, financial information is reported within the County's Comprehensive Annual Financial Report. The annual audit report of the Treasury will be provided as required by California Government Code Section 26920-26923. In addition, an annual compliance audit is conducted as required by California Code Section 27134. Daily compliance of the investment portfolio is performed by the Compliance Unit in the Office of the Treasurer Tax Collector.

In addition to the above reports, the Auditor-Controller, at the request of the Treasury Oversight Committee, conducts quarterly compliance monitoring of the Treasurer's investment portfolio. The purpose of the Auditor-Controller's monitoring is to determine whether the County's investment portfolio managed by the Treasurer is in compliance with certain provisions specified in the IPS and that all portfolio non-compliance, including technical incidents and required diversification disclosures, are properly reported in the Treasurer's Monthly Investment report.

As of June 30, 2018, the market value of the County Pool was \$4,018,864,086. The diversification of the County Pool's assets as of June 30, 2018 is shown in the following table.

% of County Pool
54.02%
27.24
0.80
8.46
2.42
4.62
2.44

⁽¹⁾ Includes \$185,696,876 of County's Taxable Pension Obligation Bonds, 2018 Series A (market value)

Source: Orange County Treasurer-Tax Collector.

The weighted average maturity of the County Pool was 350 days. The current year-to-date gross interest yield of the County Pool at June 30, 2018 is 1.28%.

Amendments to the County Investment Policy

There are proposed from time to time, the State Legislature other bills which could modify the currently authorized investments and place restrictions on the ability of public agencies, including the County, to invest in various securities. Therefore, there can be no assurances that the investments in the Pools will not vary significantly from the investments described herein or as authorized by Section 53601 of the California Government Code. There can be no assurance that State law and/or the IPS will not be amended in the future to allow for investments which are currently not permitted under such State law or the IPS, or that the objectives of the County with respect to investments will not change.

ECONOMIC AND DEMOGRAPHIC INFORMATION

Population

Growth 2007-2016. The County is the third most populous county in the State and the sixth most populous in the nation. During the period 2008 through 2017, the population of the County increased by approximately 7.9%, compared to 8.0% for the State and 7.1% for the United States.

TABLE A-22

COUNTY OF ORANGE, STATE OF CALIFORNIA AND UNITED STATES POPULATION GROWTH

Date	County	State	United States
2008	2,957,593	36,604,337	304,093,966
2009	2,987,177	36,961,229	306,771,529
2010	3,017,116	37,327,690	309,338,421
2011	3,053,465	37,672,654	311,644,280
2012	3,085,386	38,019,006	313,993,272
2013	3,113,649	38,347,383	316,234,505
2014	3,136,750	38,701,278	318,622,525
2015	3,160,576	39,032,444	321,039,839
2016	3,177,703	39,296,476	323,405,935
2017	3,190,400	39,536,653	325,719,178

Sources: U.S. Census Bureau statistics, May 2018.

Projected Growth Through 2060. Table A-23 includes population projections for the County, the State and the United States. The County is expected to have growth rates lower than both the State of California and national levels between 2020 and 2060, 12.8%, 25.4% and 21.4% respectively.

TABLE A-23

COUNTY OF ORANGE, STATE OF CALIFORNIA AND UNITED STATES POPULATION PROJECTIONS

Year	County	State	United States
2020	3,206,012	40,639,392	332,555,000
2030	3,433,510	43,939,250	354,840,000
2040	3,558,071	46,804,202	373,121,000
2050	3,615,935	49,077,801	388,335,000
2060	3,616,576	50,975,904	403,697,000

Sources: Orange County and State Projections – California State Department of Finance, January 2018. United States Projections – Census Bureau, March 2018.

Public Schools (Elementary and Secondary)

Public instruction in the County is provided by twelve elementary school districts, three high school districts, and fourteen unified (combined elementary and high school) districts. For 2017-18, the largest district, the Capistrano Unified District, had 53,622 students enrolled. Public school enrollment for the period 2012-13 through 2017-18 is presented in Table A-24.

TABLE A-24

COUNTY OF ORANGE PUBLIC SCHOOL ENROLLMENT

Grade Levels	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Total Enrollment K-12	501,801	500,487	497,116	493,030	490,430	485,835

Source: California Department of Education, DataQuest Reports.

Colleges and Universities

The County has a number of top-rated, college-level educational institutions, including the University of California at Irvine, the California State University at Fullerton, several private colleges, universities and law schools and four community college districts.

Employment

The following table summarizes the historical numbers of workers in the County since 2012.

TABLE A-25

COUNTY OF ORANGE ESTIMATED WAGE AND SALARY WORKERS BY INDUSTRY^{*}

	2012	2013	2014	2015	2016	2017
Agricultural	2,800	2,900	2,800	2,400	2,400	2,200
Mining & Logging	600	600	700	600	600	700
Construction	72,900	78,400	83,100	91,700	97,400	101,700
Manufacturing (Durable & Nondurable)	158,300	158,000	157,400	157,000	157,000	158,600
Trade, Transportation and Utilities	249,200	252,400	255,800	259,200	260,500	263,000
Information (Telecom & Publishing)	24,300	25,000	24,500	25,500	26,400	27,300
Finance, Insurance & Real Estate	108,300	113,100	113,600	116,100	117,600	119,000
Services (Professional, Health, Ed. Etc.)	662,800	686,700	709,200	738,100	765,300	785,800
Government	147,900	148,700	152,200	156,400	159,600	160,500
Total All Industries	1,427,100	1,465,800	1,499,300	1,547,000	1,586,800	1,618,800

* Does not include proprietors, self-employed, unpaid volunteers or family workers, domestic workers in households, and persons involved in labor/management trade disputes. Employment reported by place of work. Items may not add to totals due to independent rounding.

Source: California Employment Development Department.

Agriculture

Although representing a small percentage of the jobs in the County, agriculture remains an important sector of the County's economy. The total gross freight on board (f.o.b.) value of County agricultural products decreased by 1.4% to \$113,237,000 in 2017 relative to 2016. The f.o.b. is an indicator of the first point of sale for a farmer and includes cost of production, harvesting and preparation for market. A five-year summary of farm production in the County is provided in Table A-26.

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TABLE A-26

COUNTY OF ORANGE GROSS VALUE OF FARM PRODUCTION

Production Type	2013	2014	2015	2016	2017
Animal Industry	\$396,010	\$195,000	\$184,000	\$887,000	\$2,094,000
Field Products	425,653	551,000	874,000	732,000	1,187,000
Nursery	73,567,293	67,242,000	63,961,000	55,685,000	61,670,000
Orchards	40,984,835	45,473,000	40,268,000	38,344,000	33,935,000
Vegetables	21,665,539	18,792,000	20,189,000	19,147,000	14,351,000
Total	\$137,039,330	\$132,253,000	\$125,476,000	\$114,795,000	\$113,237,000

Source: Orange County Agricultural Commissioner, Annual Orange County Crop Reports.

Labor Force, Employment and Unemployment

The following table summarizes the labor force, employment, and unemployment figures over the period 2010 through 2017 for the County and the State.

TABLE A-27

COUNTY OF ORANGE AND STATE OF CALIFORNIA LABOR FORCE, EMPLOYMENT AND UNEMPLOYMENT YEARLY AVERAGE

Year and Area	Civilian Labor Force	Civilian Employment	Civilian Unemployment	Civilian Unemployment Rate
2010				
Orange County	1,537,200	1,387,400	149,700	9.7%
California	18,336,300	16,091,900	2,244,300	12.2
2011				
Orange County	1,546,400	1,406,400	140,000	9.1
California	18,415,100	16,258,100	2,157,000	11.7
2012				
Orange County	1,562,100	1,439,300	122,900	7.9
California	18,523,800	16,602,700	1,921,100	10.4
2013				
Orange County	1,565,300	1,462,300	103,100	6.6
California	18,625,000	16,958,400	1,666,600	8.9
2014				
Orange County	1,572,700	1,486,400	86,300	5.5
California	18,758,400	17,351,300	1,407,100	7.5
2015				
Orange County	1,588,800	1,517,800	70,900	4.5
California	18,896,500	17,724,800	1,171,700	6.2
2016				
Orange County	1,602,500	1,537,700	64,800	4.0
California	19,093,700	18,048,800	1,044,800	5.5
2017				
Orange County	1,618,800	1,561,700	57,000	3.5
California	19,311,700	18,387,800	923,900	4.8

Source: California Employment Development Department. Data not seasonally adjusted. March 2017 Benchmark, data as of March 2018.

Taxable Sales

Table A-28 summarizes the annual volume of taxable transactions since 2012.

TABLE A-28

COUNTY OF ORANGE TAXABLE TRANSACTIONS⁽¹⁾ (In Millions)

Type of Business	2013	2014	2015	2016	2017	2018 ⁽²⁾
General Merchandising and Clothing	\$8,933	\$9,150	\$8,836	\$8,892	\$9,089	\$9,342
All Food and Drink	8,298	8,814	9,636	10,020	10,230	10,524
Motor Vehicles and Parts	7,148	7,766	8,353	8,649	8,915	9,063
Service Stations	4,707	4,675	3,768	3,347	3,552	3,838
All Other	28,506	29,693	30,766	31,604	32,220	32,871
Total Taxable Sales	\$57,591	\$60,097	\$61,358	\$62,511	\$64,006	\$65,639

⁽¹⁾ May not add due to rounding

⁽²⁾ 2018 reflects year-end forecast.

Source: The Chapman University Economic & Business Review, June 2018.

Housing Characteristics

The total number of housing units in the County was estimated by the California State Department of Finance to be 1,094,169 as of January 1, 2018. This compares to 969,484 reported in 2000 and 875,105 in 1990. According to CoreLogic the May 2018 median home price in the County was \$740,000 as compared to the \$537,450 for the six Southern California Counties combined.

Building Permits

The total valuation of residential building permits issued in the County is projected to exceed \$3.9 billion in 2018 and was \$3.3 billion in 2017. Table A-29 provides a summary of residential building permit valuations in the County during the period 2013 through 2018.

TABLE A-29

COUNTY OF ORANGE RESIDENTIAL BUILDING PERMIT VALUATIONS

	2013	2014	2015	2016	2017	2018 ⁽¹⁾
Permit Valuation						
Residential*	\$ 2,654	\$ 2,640	\$ 2,834	\$ 3,160	\$ 3,321	\$ 3,908
Nonresidential*	1,521	1,993	2,196	2,487	2,284	2,787

⁽¹⁾2018 reflects year-end forecast.

* Permit valuations are in millions

Source: The Chapman University Economic & Business Review, June 2018.

Water Supply

Maintaining the County's water supply is the responsibility of the Orange County Water District, manager of the County's groundwater basin, and the Municipal Water District of Orange County, the County's largest manager of imported water. Approximately 75% of the County's water is from local groundwater sources; the rest is imported. The County's natural underground reservoir is sufficient to carry it through temporary shortfall periods, but local supplies alone cannot sustain the present population.

Clean Water Compliance

The federal Clean Water Act ("CWA") was adopted to restore the physical, chemical, and biological integrity of the nation's waters by, among other requirements, establishing water quality standards. The states are required to evaluate the quality of their jurisdictional waters against these water quality standards periodically. Failure to meet standards results in a finding that a water body is impaired, which requires development of a Total Maximum Daily Load ("TMDL") for every pollutant contributing to impairment. A TMDL establishes the maximum amount of a pollutant that a water body can receive and still achieve water quality standards under the CWA.

The CWA made it unlawful to discharge anything except clean rainwater into the waters of the United States without a permit from the National Pollutant Discharge Elimination System ("NPDES"), which was also established by CWA. In California, nine California Regional Water Quality Boards ("Regional Boards") issue NPDES permits, with approval by the California State Water Resources Control Board and the US Environmental Protection Agency ("EPA"). Municipal separate storm sewer systems ("MS4") are required to have MS4 NPDES permits. The County and local cities are under the jurisdiction of two MS4 permits. The County serves as lead permittee for both permits and the cities are co-permittees. Jurisdictions in the northern portion of the County are subject to the Santa Ana Regional Board MS4 NPDES permit, while jurisdictions in the south are subject to the San Diego Regional Board MS4 NPDES permit.

The MS4 NPDES permits have numerous requirements with which the County must comply, including compliance monitoring of water quality, reporting, and implementation actions to reduce pollutants in the MS4 discharges. Although unlikely to occur, the applicable water boards are able to assess administrative fines of up to \$10,000 per day of violation. In addition, the CWA allows any citizen to sue for non-compliance and therefore the County could be exposed to litigation by third parties.

The newest MS4 NPDES permits will have new requirements for comprehensive plans to address water quality in the County. The MS4 NPDES permits renewal process is several years behind schedule and the applicable watershed management plans are still in development. Thus, the capital projects required for water quality improvement are not yet known, and as a result, it is not possible to estimate the implementation costs with any reasonable specificity. However, the costs of such capital projects could be very significant over time.

The County is employing a multi-faceted strategy to comply with the MS4 NPDES permit requirements and reduce the estimated costs to implement the watershed management plans. The County works closely with the applicable Regional Boards to evaluate monitoring data and implement special studies to help identify the causes of water quality impairments, which in turn may lead to amendments to water quality regulations and reductions in implementation costs. In this way, the County can focus its resources on improvements that are likely to have greater benefits to water quality. The County also implements a public education and outreach program to help educate the citizens of the County on the importance of water quality, with a substantial effort toward educating youth. One of the goals of this approach is to prevent pollutants from entering water bodies in the first place, which is much more efficient that mitigating water pollution after it has already occurred. Another strategy the County and other MS4 copermittees employ is to seek outside funding opportunities, including grants, to help fund special studies and water quality improvement projects, which will help defray compliance costs.

Recreation and Tourism

The County is a tourist center in Southern California because of the broad spectrum of amusement parks and leisure, recreational, and entertainment activities that it offers. These tourist attractions are complimented by the year-round mild climate.

Along the County's Pacific Coast shoreline are five state beaches and parks, five municipal beaches, and five County beaches. There are three small-craft harbors in the County; Newport, Huntington, and Dana Point harbors.

Other major recreational and amusement facilities include Disneyland, Disney's California Adventure, Knott's Berry Farm, and the Spanish Mission of San Juan Capistrano. Also located within the County are the Anaheim Convention Center, Angel Stadium of Anaheim home of the Major League Baseball Team Los Angeles Angels of Anaheim, Honda Center of Anaheim home of the National Hockey Team Anaheim Ducks, Segerstrom Center for the Arts, and the Art Colony at Laguna Beach with its annual art festival.

Transportation

The County is situated in one of the most heavily populated areas in California and has access to excellent roads, rail, air, and sea transportation. The Santa Ana Freeway (I 5) provides direct access to downtown Los Angeles and connects with the San Diego Freeway (I 405) southeast of the City of Santa Ana providing a direct link with San Diego. The Garden Grove Freeway (SR 22) and the Riverside Freeway (SR 91) provide east-west transportation, linking the San Diego Freeway, Santa Ana Freeway and the Newport Freeway (SR 55). The Newport Freeway provides access to certain beach communities.

Drivers in the County have access to five toll roads. The 91 Express Lanes is a 10-mile express lanes toll road in the median of the SR 91 connecting Orange County and Riverside County. The San Joaquin Toll Road (73) runs from Costa Mesa to Mission Viejo connecting to the I-405 and the I-5 freeways. The Foothill Eastern Toll Roads consisting of the 241, 261 and 133 connect to the SR 91 near the Riverside County line and I-5 freeway in the City of Irvine, the Laguna Canyon Road, and other cities in South County.

Rail freight service is provided by the Burlington Northern Santa Fe Railway and the Union Pacific Railroad Company. Amtrak provides passenger service to San Diego to the south, Riverside and San Bernardino Counties to the east, and Los Angeles and Santa Barbara to the north. Metrolink provides passenger service to San Bernardino and Riverside Counties to the east, San Diego County to the south and Los Angeles County to the north. Bus service is provided by Greyhound Bus Lines. The Orange County Transportation Authority provides bus service between most cities in the County. Most interstate common carrier truck lines operating in California serve the County.

John Wayne Airport is located in the unincorporated area between the cities of Costa Mesa, Irvine, and Newport Beach and is owned and operated by the County. The airport is classified as a medium air traffic hub by the Federal Aviation Administration, serving the County and portions of Los Angeles, Riverside, San Bernardino and San Diego counties (its "Trade Area"). The airport is an origination and destination airport, primarily for short-to-medium haul markets in its Trade Area. Presently, thirteen airlines operate out of the airport, including ten commercial airlines (Alaska, American, Delta, Frontier, Southwest, United, Compass, Horizon, Skywest Commercial, and WestJet), one commuter airline (SkyWest dba United Express and Delta Connection) and two cargo airlines (FedEx and UPS). From January through December 2017, the airport served approximately 10.4 million passengers. General aviation activities at the airport are served by two full service Fixed Base Operators.

Natural Disasters

Natural disasters, including floods, fires, and earthquakes, have been experienced in the County. Seismic records spanning the past half century and historic records dating from the 1700s through the early 1900s indicate that the County is a seismically active area.

Cybersecurity

The County relies on a large and complex technology environment to conduct its operations. As a recipient and provider of personal, private and sensitive information, the County and its departments face multiple cyber threats including, but not limited to, hacking, viruses, malware and other attacks on computers and other sensitive digital networks and systems. There have been many cyber-attack attempts on the County's computer system, but not any resulting in a material compromise of the system, data loss or breach that the County has identified.

In 2014, the County created the Cybersecurity Joint Task Force ("CSJTF") comprised of County department operations, policy and Information Technology (IT) staff. The CSJTF meets monthly to produce the County Cybersecurity Best Practices Manual. The CSJTF has also developed, reviewed and approved Countywide Security policies, plans and guidelines.

Through the Enterprise Privacy & Cybersecurity Program, the County implements a mandatory Cybersecurity Awareness Training (CSAT) to its workforce members. The County is establishing a Security Operations Center "SOC" with cybersecurity professionals for cyber-attack monitoring, investigation, and response. The County is deploying the Security Information & Event Management (SIEM) which enable security administrators to collect log data of all events from a wide variety of network devices in the County to identify and report on security threats and suspicious behavior. Implementation of an integration threat solution anti-virus using artificial intelligence (AI) to County workstations has been implemented in many departments. The County is also in the process of deploying a next generation cloud-based proxy and firewall that would provide Internet security, including web security.

In 2017, the Board of Supervisors authorized the Chief Information Officer to execute a contract with Tevora Business Solutions, Inc. to conduct a Countywide Cybersecurity Assessment and Audit of all departments. The assessment and audit was based on 10 security domains established by the Department of Homeland Security (DHS) Cyber Resilience Review (CRR), Vulnerability Assessment, and On-site Validation of Physical Security Controls.

No assurances can be given that the County's security and operational control measures will ensure against any and all cybersecurity threats and attacks. A cybersecurity incident or breach could damage the County's Information Technology systems and cause disruption to County services and operations. Although the County carries cyber liability insurance in the amount of \$75 million, the cost of any such disruption or remedying damage caused by future attacks could be substantial. The County will continue to assess cyber threats and protect its data and systems.