

MANAGEMENT REPORT FOR 2018-2019



9/17/2019

Kinneloa Irrigation District

Prepared by Melvin L. Matthews, General Manager

MANAGEMENT REPORT FOR 2018-2019

SUMMARY OF PRODUCTION SOURCES, CUSTOMER SALES, RAINFALL, POWER COSTS, LONG AND SHORT-TERM STORAGE AND ACTIVITIES AND INITIATIVES FOR THE WATERMASTER YEAR OF 2018-2019, JULY THROUGH JUNE

Production

The Kinneloa Irrigation District (KID) produced 792.2 acre-feet from our wells and tunnels for the year of 2018-2019, July through June, as shown in Figure 1B. 658.6 acre-feet were produced for our retail customers and other uses, and 133.6 acre-feet were produced for delivery to the City of Pasadena. Water production for our retail customers and system use was 10% less than the 734.9 acre-feet produced last year. Figures 1A & 1B include data from 1994-1995 through 2018-2019 for all production sources as well as for surface water and ground water, which is diverted from our system for spreading credits. Spreading credits are added to our available extraction rights. Figure 2 shows total production from the KID wells and tunnels. Tunnel production level is dependent on rainfall and has ranged from a high of 530.1 acre-feet in 2005-2006 to a low of 112.4 acre-feet in 2015-2016. The tunnel production for 2018-2019 was 142.2 acre-feet which is significantly below the 25-year average of 242.3 acre-feet. Figure 3 is a pie chart showing the percentage of total production by source. This year our wells produced approximately 82% of the water and the tunnels produced 18% of the water.

Sales

Total sales to retail customers were 562.1 acre-feet as shown in Figure 4. The average monthly sales of water during the year from 1994-1995 to 2018-2019 are shown in Figure 5. Peak sales are usually in the July through October period and minimum sales usually occur in December through March period. Weather conditions in a year can cause these periods to shift and can drastically affect the total sales for the year. Although the rainfall this year was slightly above the average rainfall, it is uncertain whether the six-year drought has ended. Figure 6 shows an analysis of the distribution of monthly water usage per customer for the month of June in the eight years from 2012 to 2019. June was chosen for this analysis because it represents average monthly water usage for the year. The data shows the percentage of our customers with usage of 10 units or less per month in June 2019 was 25.8% as compared to 23.4% in June 2018; usage between 11 and 50 units per month in June 2019 was 48.2% as compared to 46.9% in June 2018; usage between 51 and 100 units per month in June 2019 was 19.0% as compared to 23.2% in June 2018; usage more than 100 units per month in June 2019 was 7.0% as compared to 6.4% in June 2018. Each unit is equivalent to one hundred cubic feet (CCF) or 748 gallons. This usage pattern has been relatively constant over the past eight years, but this year there was a greater percentage of customers in the two lower ranges of usage.

Water Use Efficiency

The KID has extensively promoted measures to increase water use efficiency over the past thirteen years and has participated in rebate programs to provide incentives to our customers to reduce

water usage. The usage was down in 2018-2019 as compared to 2017-2018, and the data indicates a 26% decrease in usage as compared to the base year of 2006-2007 when water use efficiency became a mandate from the State and a priority for the KID. The 2018-2019 usage is 9% lower than the 25-year average of 691.2 acre-feet. However, it is too soon to know whether there has been permanent reduction in water usage due to state regulations, our water conservation program or the extensive media coverage during the drought and the current media encouraging water use efficiency. A comparison of total water sales for January 2013 through June 2019 is shown in Figure 7. The percentage reduction for the calendar year of 2018 as compared to 2013 was 13%.

Non-Revenue Water Use and Water Loss

The difference between the water produced and water sold and used for system purposes (which is the water loss for the system) was 29.7 acre-feet or 4.5% as shown in Figure 1B. The loss is attributed to system leaks, main flushing for water quality purposes, fire flow tests, unmetered water used for various other purposes, normal operational procedures at KID facilities and water meter inaccuracies. This loss is less than the 25-year average of 72.6 acre-feet or 9.5%. A water loss of less than 10% is excellent by industry standards. The principle reasons for the decrease as compared to 2017-2018 was that water for main flushing was metered and fewer fire flow tests were performed during the year.

Rainfall

Rainfall for 2018-2019 was 27.8 inches as shown in Figures 1B and Figure 8 as compared to 10.3 inches in the previous year and the 25-year average of 21.1 inches. Whether this is an indication of the end of the seven-year drought is uncertain. Nevertheless, it will take multiple years of above-average rainfall before there is a significant recovery of tunnel production and spreading credits. The KID continues to lease additional pumping rights from other agencies to offset the decline in tunnel production and spreading credits, but these supplemental production sources are not guaranteed and an increase in water-use efficiency may be needed to offset the loss of available water for production.

Power Cost

Figure 9 shows the total cost and the power cost per acre-foot of total production for 2018-2019. Since most of our power consumption is for pumping, it is also an approximate indirect measure of production efficiency. However, it should be noted that this indicator does not consider the percentage of well production vs. tunnel production nor does it consider rising electricity rates. In years of high tunnel production, less water is pumped from our wells saving us considerable power cost.

Although electricity rates have increased over the years, we have been able to mitigate most of the increases by participating in various time-of-use and interruptible power programs that restrict our use of power to non-peak hours in exchange for lower rates. We have also installed higher-efficiency motors when equipment has been replaced. The net effect has been to stabilize our power costs. The 2018-2019 cost was \$147 per acre-foot of total production as compared to \$155 per acre-foot for the previous year and the 25-year average of \$113.8 per acre-foot. Even though we will continue to take advantage of cost-reduction programs, it will be more difficult to maintain our current cost especially considering the announced rate increases and the mandated switch to more “green” power in the years ahead.

Long-Term Storage

The Raymond Basin Management Board (RBMB) established a long-term storage program to cover situations such as prolonged drought or unusually high demand that might lead to over pumping of our water rights in the current year. This program is the equivalent of a savings account for surplus water. The KID activated our long-term storage account for the first time in 2004-2005 by adding 327 acre-feet of surplus water as shown in Figure 1A. The following year we added additional storage to bring the account to 848 acre-feet. Some of this storage was used in 2006-2007 to support our water sales to the City of Pasadena so the remaining storage at the end of 2006-2007 was 729 acre-feet. The net addition to our long-term storage in 2007-2008 was 69 acre-feet and the total was 798 acre-feet at the end of that year. Due to declining water levels in the Raymond Basin, the RBMB voted to suspend the program and freeze the total at the end of the 2008-2009 year.

The result of the additions and withdrawals, as shown in Figure 10, is that we still have 790 acre-feet in the account that may be used to offset any shortages in the future. We will not be able to add any surplus to the account unless the RBMB changes the policy. Our current plan is to use this water only if we are unable to lease temporary pumping rights at a reasonable cost or unable to acquire additional pumping rights from another Raymond Basin member. This additional water in storage is especially important to the KID considering that the RBMB has implemented a 30% reduction of our adjudicated pumping rights to address declining water levels in the basin. The RBMB will continue to monitor basin pumping levels to see if stabilization can be achieved without the injection of imported water or other recovery efforts. RBMB could approve elimination of the long-term storage program and KID could lose the ability to pump the 790 acre-feet in the account.

Short-Term Storage

The RBMB established a short-term storage program in 2016 for the Pasadena subarea for agencies with carryover rights of less than 300 acre-feet to allow operational flexibility and allow for better planning and utilization of leases, management of decreed rights and maximize beneficial use of spreading credits. The maximum amount of water is limited to 300 acre-feet and must be used within the time specified by the RBMB rules. The KID had 145 acre-feet in our account in 2018-2019. If the combined balance of the 10% carryover rights and short-term storage exceeds 300 acre-feet on June 30th, the excess amount is deducted from short-term storage and lost for future pumping.

Production Issues

Figure 1B shows that the Wilcox Well only produced one acre-foot of water in 2018-2019 as compared with 272.4 acre-feet in the peak year of 1999-2000. The level in the Raymond Basin aquifer at this facility has caused a 50% reduction in the available operational flow rate because the output from this well needs to be restricted to prevent entrainment of air and damage to the pump. This operational necessity is inefficient from a power standpoint and relegates this well to emergency and supplemental supply uses only. The lost production from Wilcox Well was shifted to the K-3 Well which accounted for 82% of our total annual production in 2018-2019. A continued decline in basin levels could also affect the K-3 Well in future years, and our increased dependence on a single production source diminishes production reliability.

The declining production from the KID's tunnels has also become a significant issue. Tunnel water is not counted in our adjudicated pumping rights and is our only source of low-cost supplemental water. Multiple years of above-average rainfall will be needed to increase the contribution to

our total production from the current 18% to the more typical 25-50%. Thus, continued maintenance of our tunnel sources is a high priority.

Supply Issues

The court-ordered adjudication of pumping rights in the Raymond Basin no longer matches the natural replenishment rate. The voluntary 30% pumping reduction in the Pasadena subarea has helped to reduce the rate of decline in the basin level, but the RBMB has not yet developed an external replenishment source. Therefore, additional water resources, conservation measures and reduced pumping are being considered to stabilize the basin level.

With the exception of the KID, all water agencies in the area purchase imported supplemental water from the Metropolitan Water District of Southern California (MWD) or through its wholesale distributor, Foothill Municipal Water District (FMWD). The KID has not needed to purchase imported water because our local tunnel water, adjudicated pumping rights, spreading credits and available leases have been enough to meet customer demand. However, our independence from imported water is not assured unless we are able to continue to lease or purchase unused pumping rights from other water agencies in the area. We will also continue to rely on our interconnections with the City of Pasadena for a water supply during system emergencies or for planned facility maintenance purposes, but that water must be returned to Pasadena as soon as possible after an event or purchased at the retail rate. The KID will continue to work with the FMWD to develop a long-term plan for supplemental water in case our ground water pumping rights are permanently reduced and/or leased or purchased pumping rights are no longer available. Since there is no pipeline from MWD or FMWD to the KID, a new connection would be needed, or an arrangement made with an adjacent water agency to wheel FMWD/MWD water through its pipelines to the KID. FMWD is the only source of supplemental water currently available to the KID.

Capital Improvement and Maintenance Projects

The KID continues to perform projects identified in the *Water Master Plan for the Kinneloa Irrigation District* and other planning documents to improve the District's emergency preparedness and operational performance. One pipeline project was completed in the 2018-2019 year. Thirteen major pipeline projects remain to be completed at the estimated cost of \$3,000,000. Although increased fire-flow capacity is the primary objective of these projects, other benefits include replacement of older portions of the distribution system that have reached the end of their useful life cycles. Two pipeline projects are in the design phase. In addition, approximately \$1,000,000 in facility improvements and equipment replacement are on the planning horizon.

Major maintenance and upgrade projects include repairs and improvements to our Supervisory Control and Data Acquisition (SCADA) System, upgrades to our automated meter reading equipment and software and replacement of two of the District's vehicles.

Administrative Activities

The primary objectives of the General Manager beyond the general and financial management of the KID were to fill two vacant positions and to develop a staff management plan and to prepare an organizational structure to effectively manage and provide continuity in future years. The office and system operation functions are now fully staffed. Written procedures have been prepared for major office and customer service functions and procedures for system operations are being prepared.

Financial Summary

The District's financial statements and independent auditors' report for the calendar years of 2018 and 2017, January through December were completed and presented to the Board of Directors in June 2019. The auditors' opinion was that the financial statements presented fairly in all material respects the financial position of the Kinneloa Irrigation District as of December 31, 2018 and 2017, and were in conformity with accounting principles generally accepted in the United States of America. The management's discussion and analysis from that report are presented below. The complete report is published on the District's website at <https://kinneloa Irrigation District.info>. **Because the Management's Discussion and Analysis was prepared for the calendar year January 1 - December 31, which is the fiscal year for the District, the information for the years and the comparisons between the years regarding production and usage are different than the information and figures on pages 1-4 and 10-21, which were based upon the watermaster year July 1, 2018 - June 30, 2019.**

KINNELOA IRRIGATION DISTRICT MANAGEMENT'S DISCUSSION AND ANALYSIS DECEMBER 31, 2018 AND 2017

Management's discussion and analysis of the financial performance of Kinneloa Irrigation District (the "District") provides an overview of the District's financial activities for the fiscal year ended December 31, 2018.

FINANCIAL HIGHLIGHTS

The District's operating revenues, consisting primarily of water sales, increased by 3.3% to \$1,690,731 as compared to 2017 operating revenues of \$1,636,661. The increase is primarily the result of the rate increase in January 2018.

Total operating, maintenance, administrative and general expenses including depreciation decreased by 16% to \$1,263,701 as compared to \$1,505,483 in 2017. The net decrease is primarily due to the change of estimate due to GASB 68. A schedule of expenses is presented on page 9.

DESCRIPTION OF BASIC FINANCIAL STATEMENTS

The District operates as a utility enterprise and its annual report consists of a series of financial statements presented on the full accrual basis of accounting. The Balance Sheets and the Statements of Revenues, Expenses and Changes in Net Position provide information about the District as a whole and present a longer-term view of the District's finances.

DESCRIPTION OF OPERATIONS

The District provides water to 587 retail customers in a service area that includes a portion of the unincorporated Los Angeles County that is east of Altadena and an adjacent portion of the City of Pasadena. The District also sells excess groundwater when available to the City of Pasadena on a wholesale basis.

The District obtains its water from two vertical wells and five horizontal wells. These sources are sufficient to meet customer demand except in periods of extreme drought or another

emergency. The District has five interconnections with the City of Pasadena municipal water system which allow either agency to supply water to the other agency under emergency conditions. More information about the Kinneloa Irrigation District can be found on our Internet site at <https://kinneloa Irrigation District.info>.

CONDENSED FINANCIAL INFORMATION

The following condensed financial information provides an overview of the District's financial activities for the year ended December 31, 2018 and 2017.

	<u>2018</u>	<u>2017</u>
ASSETS AND DEFERRED OUTFLOWS		
Current assets	\$ 2,299,748	1,941,999
Capital assets, net	5,612,230	5,889,007
Deferred outflows of resources	<u>99,141</u>	<u>21,181</u>
Total assets and deferred outflows of resources	<u>8,011,119</u>	<u>7,852,187</u>
LIABILITIES AND DEFERRED INFLOWS		
Current liabilities	\$ 189,909	169,414
Noncurrent liabilities	2,006,232	2,200,456
Deferred inflows of resources	<u>36,648</u>	<u>83,822</u>
Total liabilities and deferred inflows of resources	<u>2,232,789</u>	<u>2,453,692</u>
NET POSITION		
Investment in capital assets	5,612,230	5,889,007
Unrestricted	<u>166,100</u>	<u>(490,512)</u>
Total net position	<u>5,778,330</u>	<u>5,398,495</u>
Total liabilities, deferred inflows of resources and net position	\$ <u>8,011,119</u>	<u>7,852,187</u>

Capital and other assets – The change in capital and other assets is net of a decrease in capital and other assets less current year's depreciation of \$332,812.

Net position – The net position increased from the prior year due to the current year's excess of revenues over expenses. Unrestricted net assets consist of net assets that do not meet the definition of "restricted" or "invested in capital assets, net of related debt".

CHANGES IN NET POSITION

	<u>2018</u>	<u>2017</u>
Total operating revenues	\$ 1,690,731	1,636,661
Total non-operating revenues	<u>24,095</u>	<u>16,953</u>
Total revenues	1,714,826	1,653,614
Total operating expenses	1,263,701	1,505,483
Total non-operating expenses	<u>71,290</u>	<u>75,916</u>
Total expenses	1,334,991	1,581,399
Change in net position	379,835	72,215
Net position, beginning of year	<u>5,398,495</u>	<u>5,326,280</u>
Net position, end of year	\$ <u>5,778,330</u>	<u>5,398,495</u>

Revenues – Retail water sales by volume increased to 615 acre-feet as compared to 594 acre-feet in 2017 and the total operating revenue increased to \$1,690,731 from \$1,636,661 due to an increase of rates in January 2018 and the increased water sales.

The District also received \$36,703 in non-operating revenue from interest on its temporary investments and a refund from JPIA. The District’s temporary investments at year end were \$2,063,236 and \$1,667,327 in 2018 and 2017, respectively. The District has identified \$4,212,000 in future projects in its Water Master Plan. The temporary investments will be used for some of these projects and also provide an operating reserve in accordance with the District’s reserve policy.

Expenses – The District’s operating and maintenance expenses increased by \$89,949 in 2018 as compared to 2017. This increase is due primarily to increases in operating payroll expenses. The District’s administrative and general expenses decreased by \$316,975 due primarily to changes in estimate relating to GASB 68.

BUDGET ANALYSIS AND VARIANCES

Revenue from water sales for 2018 was \$1,690,731 as compared to the budgeted amount of \$1,485,000 for retail and wholesale water sales. The budgeted revenue was based on the actual amount from the previous year, adjusted for rate changes and/or expected new service connections for the year. However, water usage by volume increased for 2018 despite a significant educational campaign on conservation measures. Therefore, the District’s revenue was significantly higher in 2018. Total revenue for 2018 was \$1,714,826 as compared to the budgeted amount of \$1,495,000.

Overall, for 2018, the net operating income before depreciation was \$712,647, as compared to the budgeted amount of \$212,217. Capital and planned maintenance projects in the amount of \$56,035 were completed as compared to the budgeted amount of \$81,500. The cash reserve at year end was \$2,063,236 which is in the target range of \$1,000,000 to \$5,500,000 established by the Board in the Reserve Policy Funding Guidelines in the District’s Rules and Regulations. Each year the District budgets amounts for capital projects and planned maintenance projects based on its expected operations and available reserves. In 2018, the major projects and equipment purchases included water main and valve replacements, SCADA equipment and water meters.

CAPITAL ASSET AND DEBT ADMINISTRATION

Capital Assets – At December 31, 2018 and 2017, the District had investments in land, water rights, buildings, wells and distribution systems, machinery and equipment as follows:

	<u>2018</u>	<u>2017</u>
Land	\$ 96,700	96,700
Water rights	52,060	52,060
Buildings, wells and distribution system	9,500,288	9,482,141
Machinery and equipment	889,384	851,496
Totals	\$ <u>10,538,432</u>	<u>10,482,397</u>

ECONOMIC FACTORS AND NEXT YEAR'S BUDGETS AND RATES

Average inflation as measured by the consumer price index for all urban consumers in the Los Angeles area was 3.1% for the 12 months ended December 2018 and the current average rate for 2019 is 2.7%.

General economic conditions improved in 2018 and is expected to improve at a moderate pace in 2019. Although water service is considered a necessity, the continued efforts of our customers to increase water use efficiency consistent with the restrictions and regulations imposed by the State of California and the County of Los Angeles may cause a further reduction in volumetric sales. The increase in sales in 2018 was attributed to the drought in the first part of the year and the hot weather during the summer; however, normal rainfall returned in the last three months of the year and the annual rainfall in the 2018-2019 season was above average. The District anticipates that an increase in rates will probably be needed in future years to maintain water sales revenue.

In 2019, the District plans to continue capital improvement projects included in the District's Water Master Plan and planned maintenance projects using available cash reserves rather than using an installment purchase agreement or other financing.

To continue our high-priority time-critical capital improvement and planned maintenance projects, the Board of Directors approved a budget for 2019 that produces a net operating surplus near zero. However, favorable results to budget will allow additional projects to be completed.

The Board approved a 3% rate increase for 2019 to maintain the current level of water sales revenue in case there is a decline in volumetric sales or an inflationary increase in expenses. Wholesale water sales are budgeted in 2019 to offset any possible reduction in retail water sales.

Although weather will continue to play a significant role in determining retail water sales for 2019, other factors such as drought regulations make it increasingly difficult to forecast volumetric sales. However, we will continue to have the option of selling surplus water to the City of Pasadena if there is significant rainfall in 2019 and/or if there is a decline in retail sales due to greater conservation efforts. These factors when combined make it difficult to know the effect on the District's operations in 2019. Fortunately, the District has the flexibility to adjust expenditures for capital improvements and planned maintenance to meet the overall budget objectives for 2019.

CONTACTING THE DISTRICT'S FINANCIAL MANAGEMENT

This financial report is designed to provide our purveyors, customers, and creditors with a general overview of the District's finances and to show the District's accountability for the money it receives. If you have any questions about this report, or need additional financial information, contact the District's finance office at 1999 Kinclair Drive, Pasadena, CA 91107. Current and archived documents of the Kinneloa Irrigation District can also be found on our Internet site at <http://www.kinneloa Irrigation District.info>.

SCHEDULE OF EXPENSES

	<u>2018</u>	<u>2017</u>
Operating & Maintenance		
Power	\$ 127,199	122,814
Purchased water	63,135	-
Labor	184,342	164,121
Engineering	4,770	10,955
Maintenance and repairs	33,403	28,159
Water analysis	22,540	15,108
Outside contractors	114,816	129,294
Truck maintenance and fuel	19,931	12,889
Insurance	107,722	93,945
Watermaster	10,740	11,039
Other	11,695	22,020
	<u>\$ 700,293</u>	<u>610,344</u>
 Administrative and General		
Administrative salaries	\$ 134,291	130,064
Office labor	93,934	61,425
Payroll taxes	30,644	26,627
CalPERS retirement	27,756	28,499
CalPERS change in estimates	(174,306)	197,419
Outside services	28,996	27,980
Legal fees	8,425	2,205
Professional dues	10,644	10,608
Board meetings	5,000	5,200
Office expense	27,035	29,440
Telephone, internet	9,206	8,477
Accounting fees	6,750	6,750
Permits and operational fees	7,308	7,333
Information systems	14,832	5,544
Election	81	-
	<u>\$ 230,596</u>	<u>547,571</u>

Respectfully submitted to the Board of Directors,

Melvin L. Matthews

Melvin L. Matthews, General Manager

Figure 1A

Data for Watermaster Year (July through June) 1994-1995 to 2008-2009

Production in Acre-Feet		1994-1995	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
Source																
Wilcox Well		93.2	119.6	170.2	165.4	209.6	272.4	216.9	203.7	213.7	148.9	60.2	37.2	70.2	5.6	5.6
K-3 Well		285.3	238.3	263.8	330.9	567.3	562.5	425.2	514.3	457.1	551.0	319.3	423.5	860.1	543.9	611.2
Total Well		378.5	357.9	434.0	496.3	776.9	834.9	642.1	718.0	670.8	699.9	379.5	460.7	930.3	549.5	616.7
Hi-Low Tunnel		71.3	217.0	177.2	146.6	143.1	132.6	111.1	86.0	57.6	59.8	125.6	171.9	131.0	107.6	89.2
House Tunnel		37.8	43.9	35.4	33.1	41.1	31.5	26.2	21.5	16.7	12.7	12.6	44.9	26.5	20.6	12.8
Eucalyptus Tunnel		56.5	64.9	62.6	58.7	62.4	54.0	44.3	38.6	29.5	41.5	50.0	50.4	44.6	43.2	39.1
Delores Tunnel		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	126.5	223.3	83.6	63.7	40.2
Far Mesa Tunnel		73.6	69.1	67.7	68.3	78.9	74.1	56.7	52.0	47.7	45.6	68.2	39.6	13.1	48.6	42.9
Total Tunnel		239.2	394.9	342.9	306.7	325.5	292.2	238.3	198.1	151.5	162.0	382.9	530.1	298.8	283.7	224.2
Total Production		617.7	752.8	776.9	803.0	1102.4	1127.1	880.4	916.1	822.3	861.9	762.5	990.8	1229.0	833.2	840.9
Deliveries from Pasadena		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.5	0.0	0.0	18.8	0.0	0.0	1.5
Deliveries to Pasadena		0.0	0.0	0.0	-139.5	-325.8	-222.9	-64.1	-87.3	-61.7	0.0	0.0	-160.6	-321.8	0.0	-42.4
Net Import/Export		0.0	0.0	0.0	-139.5	-325.8	-222.9	-64.1	-87.3	-30.2	0.0	0.0	-141.8	-321.8	0.0	-40.9
Total Production for Retail Custom		617.7	752.8	776.9	663.5	776.6	904.2	816.3	828.8	792.1	861.9	762.5	849.0	907.2	833.2	800.0
Diversions in Acre-Feet																
Source																
Hi-Low Tunnel		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.3	0.0	0.0	0.0	0.0	0.0	0.0
House Tunnel		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	25.6	0.0	0.0	0.0	4.2
Kinneloa Canyon		140.7	50.2	54.3	56.8	48.6	52.1	33.4	28.9	12.2	9.5	31.2	40.4	45.4	27.2	21.4
Eucalyptus Tunnel		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0
Brown		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.9	16.7	0.0	0.0	0.0
Eaton Wash Sub Total		140.7	50.2	54.3	56.8	48.6	52.1	33.4	28.9	38.0	9.5	81.7	57.2	45.4	27.2	25.6
Delores Tunnel		0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.4	31.1	21.5	44.5	0.0	0.0	0.0	0.0
Long Tunnel		35.8	37.2	39.2	39.2	38.9	37.7	38.1	38.0	36.0	35.3	46.8	44.7	37.4	36.0	34.3
Far Mesa Tunnel		0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	30.2	42.5	0.0	0.0
Glen Wash		429.3	396.3	262.5	321.3	359.1	174.8	156.7	52.7	26.7	28.1	933.9	161.4	74.0	56.7	59.0
Tent Tunnel		5.1	5.5	5.4	5.3	5.8	3.4	2.4	2.3	2.1	2.0	3.2	3.5	2.9	2.5	2.1
Pasadena Glen Sub Total		470.2	439.0	307.1	365.8	403.8	215.9	201.8	134.4	95.9	86.9	1028.5	239.8	156.7	95.2	95.4
Sierra Madre Villa DB Outflow		-256.7	-32.8	-7.2	-33.7	0.0	0.0	0.0	0.0	0.0	0.0	-459.7	0.0	0.0	0.0	0.0
Net Pasadena Glen Sub Total		213.5	406.2	299.9	332.1	403.8	215.9	201.8	134.4	95.9	86.9	568.8	239.8	156.7	95.2	95.4
Total Diverted		354.2	456.4	354.2	388.9	452.4	268.0	235.2	163.3	133.9	96.4	650.5	297.0	202.1	122.4	121.0
Other Data																
Rainfall (inches)		43.6	22.6	22.8	52.3	14.5	18.8	20.0	7.9	24.5	10.1	58.0	21.8	5.8	24.6	16.1
Metered Water Usage (Acre-Feet)		584.3	668.8	679.9	600.4	666.3	782.9	710.9	739.1	717.7	772.6	672.6	785.8	847.3	754.1	729.7
Water Loss (Acre-Feet)		33.4	84.0	97.0	63.1	110.3	121.3	105.4	89.7	74.4	89.3	89.8	63.2	59.9	79.0	70.3
Water Loss (%)		5.4	11.2	12.5	9.5	14.2	13.4	12.9	10.8	9.4	10.4	11.8	7.4	6.6	9.5	8.8
RBMB Storage Account (Acre-Feet)												326.9	847.9	728.6	797.9	790.0
Power (\$)		71,086	55,137	68,132	57,193	86,488	97,064	77,780	111,676	111,062	100,410	87,537	82,476	112,924	89,011	92,204
Power (\$ per AF of Total Production)		115	73	88	71	78	86	88	122	135	116	115	83	92	107	110

Figure 1B

Data for Watermaster Year (July through June) 2009-2010 to 2018-2019

Production in Acre-Feet											25-Year
Source	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	Average
Wilcox Well	7.3	7.1	9.5	57.6	11.5	8.7	8.3	5.1	2.7	1.0	84.4
K-3 Well	610.6	580.2	708.0	584.2	676.6	574.2	574.4	556.9	706.7	649.0	527.0
Total Well	617.8	587.3	717.5	641.9	688.0	582.9	582.7	562.0	709.4	650.1	611.4
Hi-Low Tunnel	80.1	98.8	94.3	53.5	36.2	40.2	36.7	40.9	33.5	44.0	95.4
House Tunnel	13.8	14.5	15.7	14.3	10.2	0.6	0.0	0.0	0.0	0.0	19.5
Eucalyptus Tunnel	37.4	39.8	40.5	40.7	41.5	40.0	39.4	39.0	48.1	44.0	46.0
Delores Tunnel	44.8	98.5	57.7	17.4	22.9	11.0	5.1	11.7	2.3	21.0	33.3
Far Mesa Tunnel	38.9	41.2	41.2	39.3	38.6	35.9	31.3	28.5	28.8	33.2	48.1
Total Tunnel	215.0	292.8	249.3	165.2	149.4	127.6	112.4	120.0	112.7	142.2	242.3
Total Production	832.9	880.0	966.8	807.0	837.4	710.5	695.2	682.0	822.1	792.2	853.7
Deliveries from Pasadena	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
Deliveries to Pasadena	-105.1	-217.4	-239.0	-47.8	0.0	-9.0	-86.4	-55.5	-87.2	-133.6	-96.3
Net Import/Export	-105.1	-217.4	-237.8	-47.8	0.0	-9.0	-86.4	-55.5	-87.2	-133.6	-94.2
Total Production for Retail Customers	727.8	662.7	729.1	759.3	837.4	701.5	608.8	626.5	734.9	658.6	759.6
Diversions in Acre-Feet											25-Year
Source	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	Average
Hi-Low Tunnel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
House Tunnel	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	1.3
Kinneloa Canyon	21.2	37.8	37.8	35.6	27.7	30.4	30.6	33.0	16.8	20.4	37.7
Eucalyptus Tunnel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Brown	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.7
Eaton Wash Sub Total	21.2	37.8	37.8	35.6	27.7	30.7	30.6	33.0	16.8	20.8	41.7
Delores Tunnel	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	1.2	5.7
Long Tunnel	33.8	39.8	38.4	34.4	29.9	28.5	27.7	33.9	32.7	38.7	36.5
Far Mesa Tunnel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
Glen Wash	45.1	188.0	88.7	89.2	73.1	55.6	52.5	60.5	30.0	52.0	169.1
Tent Tunnel	2.0	1.8	2.8	2.3	2.3	2.3	2.3	2.3	2.3	2.3	3.0
Pasadena Glen Sub Total	80.8	229.6	129.9	125.9	105.3	88.1	82.4	96.8	65.0	94.1	217.4
Sierra Madre Villa DB Outflow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-31.6
Net Pasadena Glen Sub Total	80.8	229.6	129.9	125.9	105.3	88.1	82.4	96.8	65.0	94.1	185.8
Total Diverted	102.1	267.4	167.7	161.4	133.0	118.8	113.0	129.7	81.8	114.9	227.4
Other Data											25-Year
	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	Average
Rainfall (inches)	23.6	31.3	11.8	8.3	5.2	8.2	12.3	24.1	10.3	27.8	21.1
Metered Water Usage (Acre-Feet)	771.0	590.8	654.9	696.2	805.1	642.7	522.9	568.8	685.3	628.9	691.2
Water Loss (Acre-Feet)	61.9	71.8	74.2	63.1	32.4	58.8	85.8	57.7	49.6	29.7	72.6
Water Loss (%)	8.5	10.8	10.2	8.3	3.9	8.4	14.1	9.2	6.8	4.5	9.5
RBMB Storage Account (Acre-Feet)	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	790.0	759.4
Power (\$)	92,700	92,700	93,964	105,248	113,611	114,917	103,595	117,767	127,709	116,189	95,143
Power (\$ per AF of Total Production)	111	105	97	130	136	162	149	173	155	147	113.8

Figure 2
Total Production
July through June

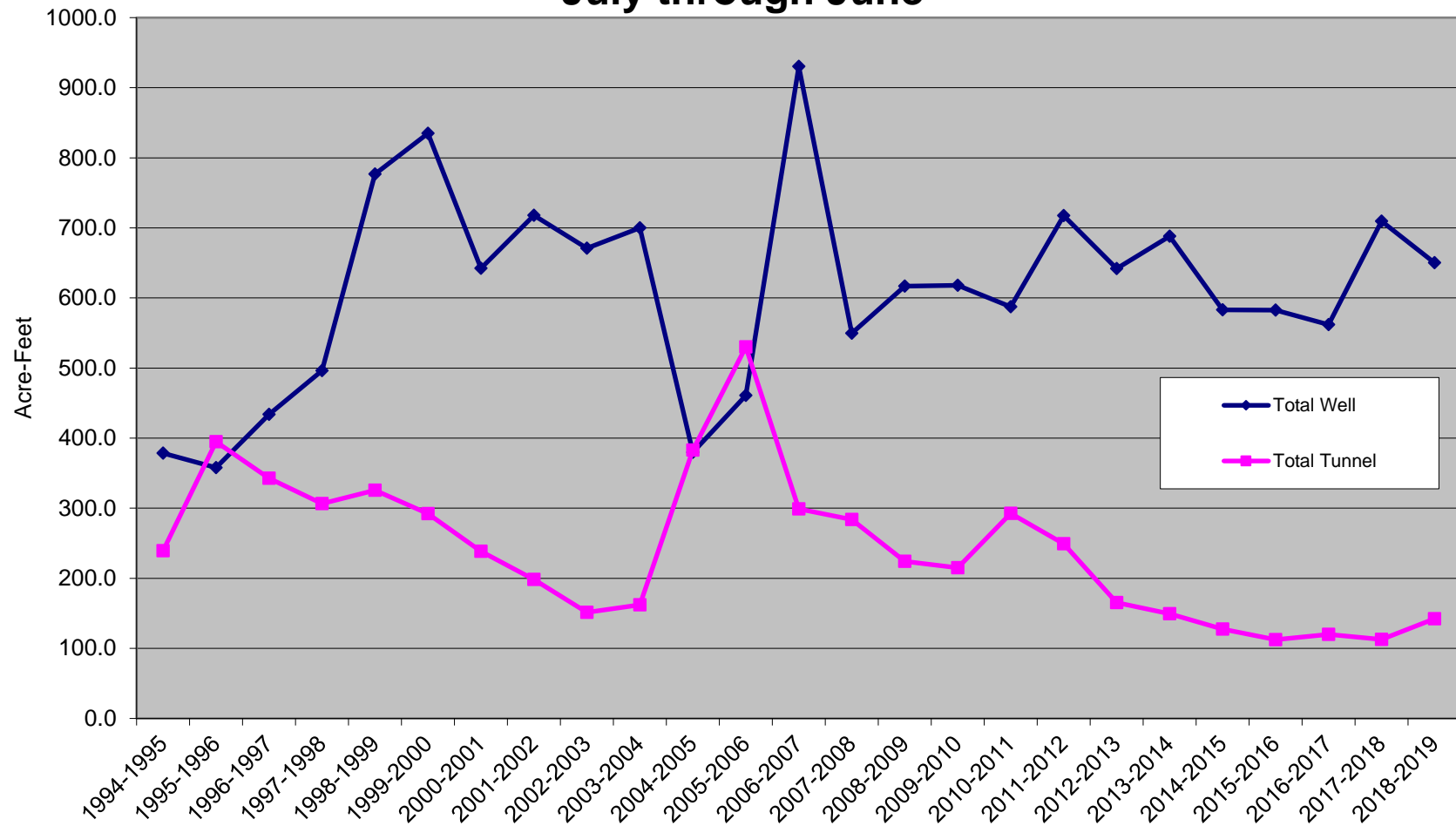


Figure 3
2018-2019 Production Sources
July through June

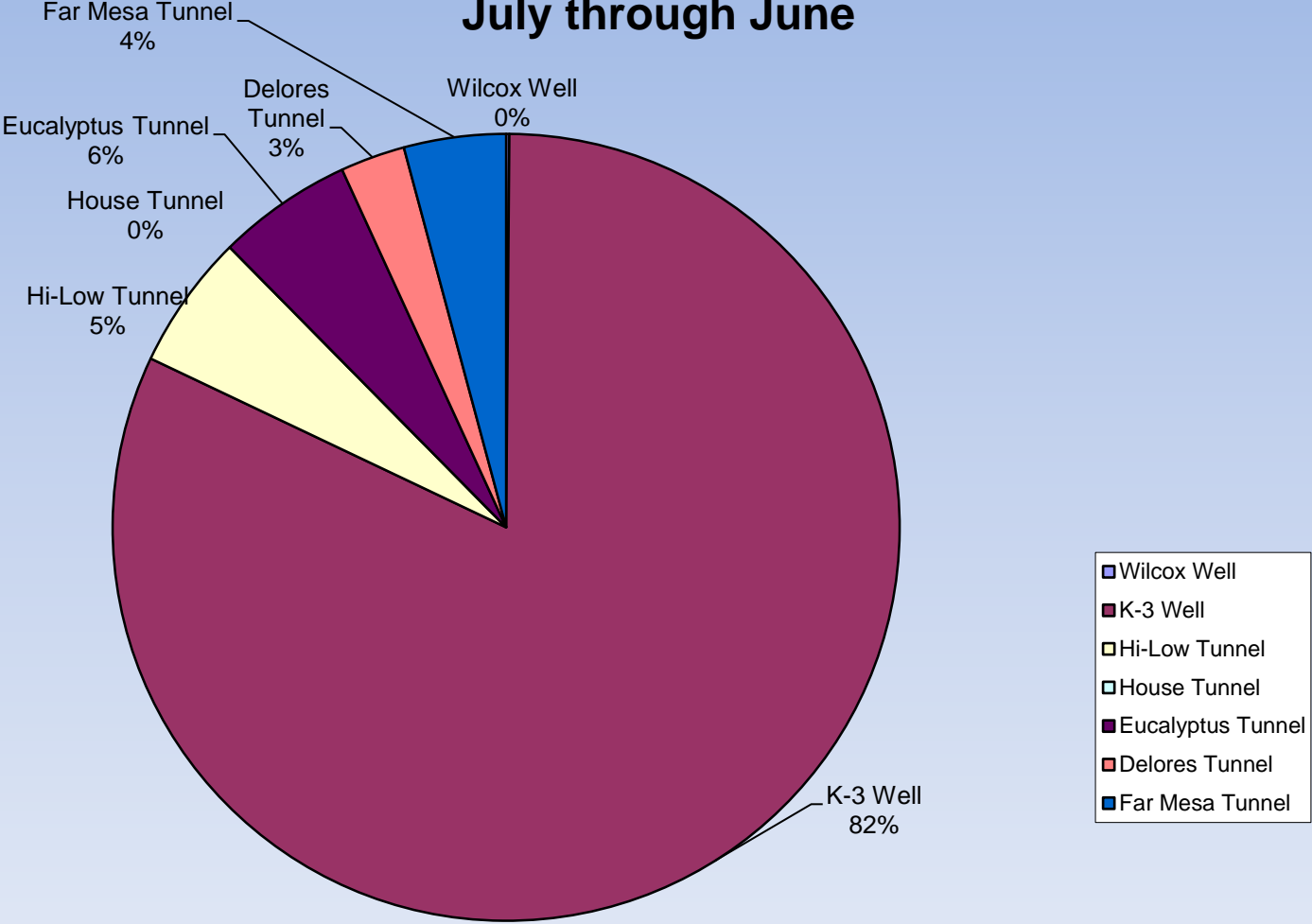
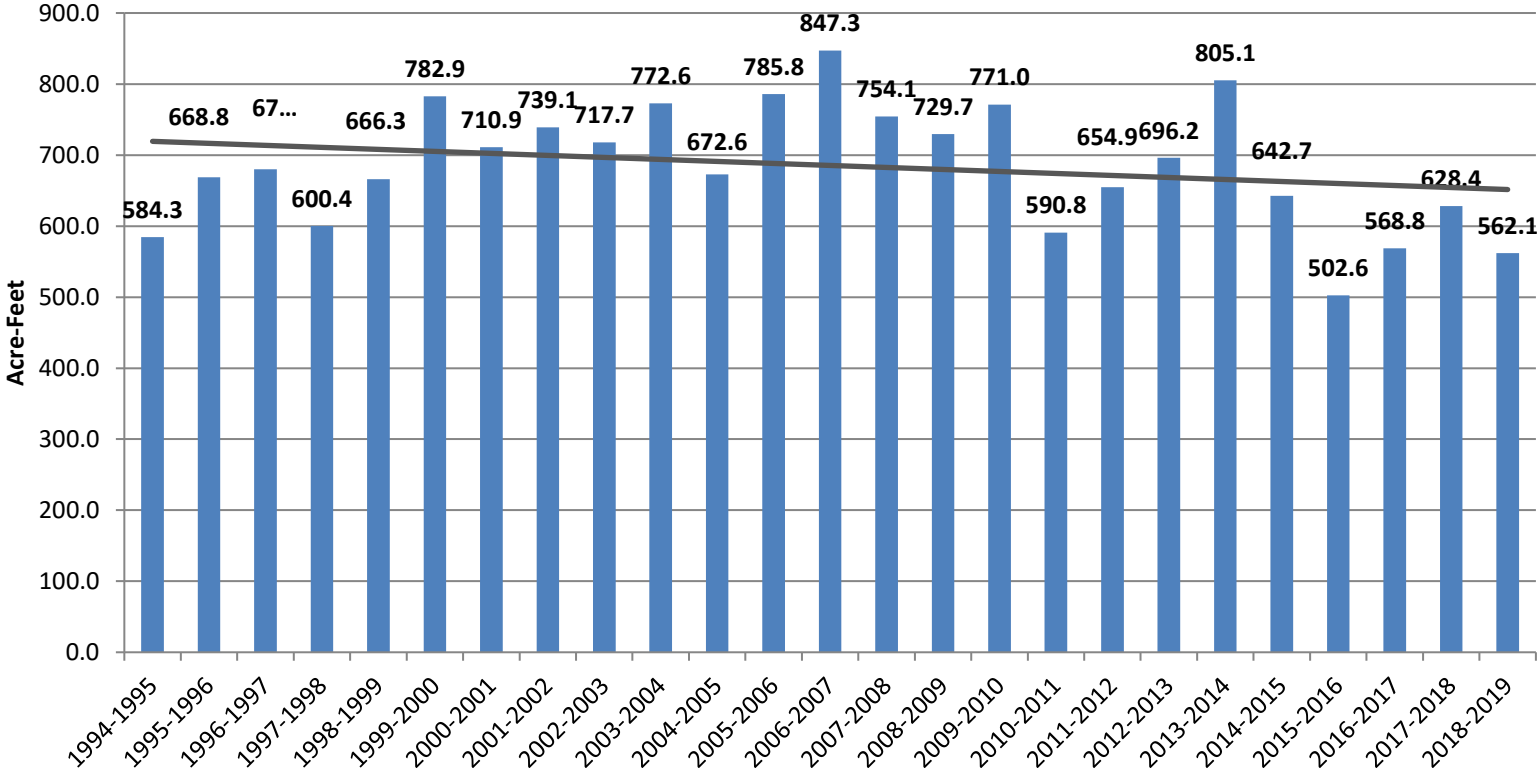


Figure 4 Annual Water Sales July through June



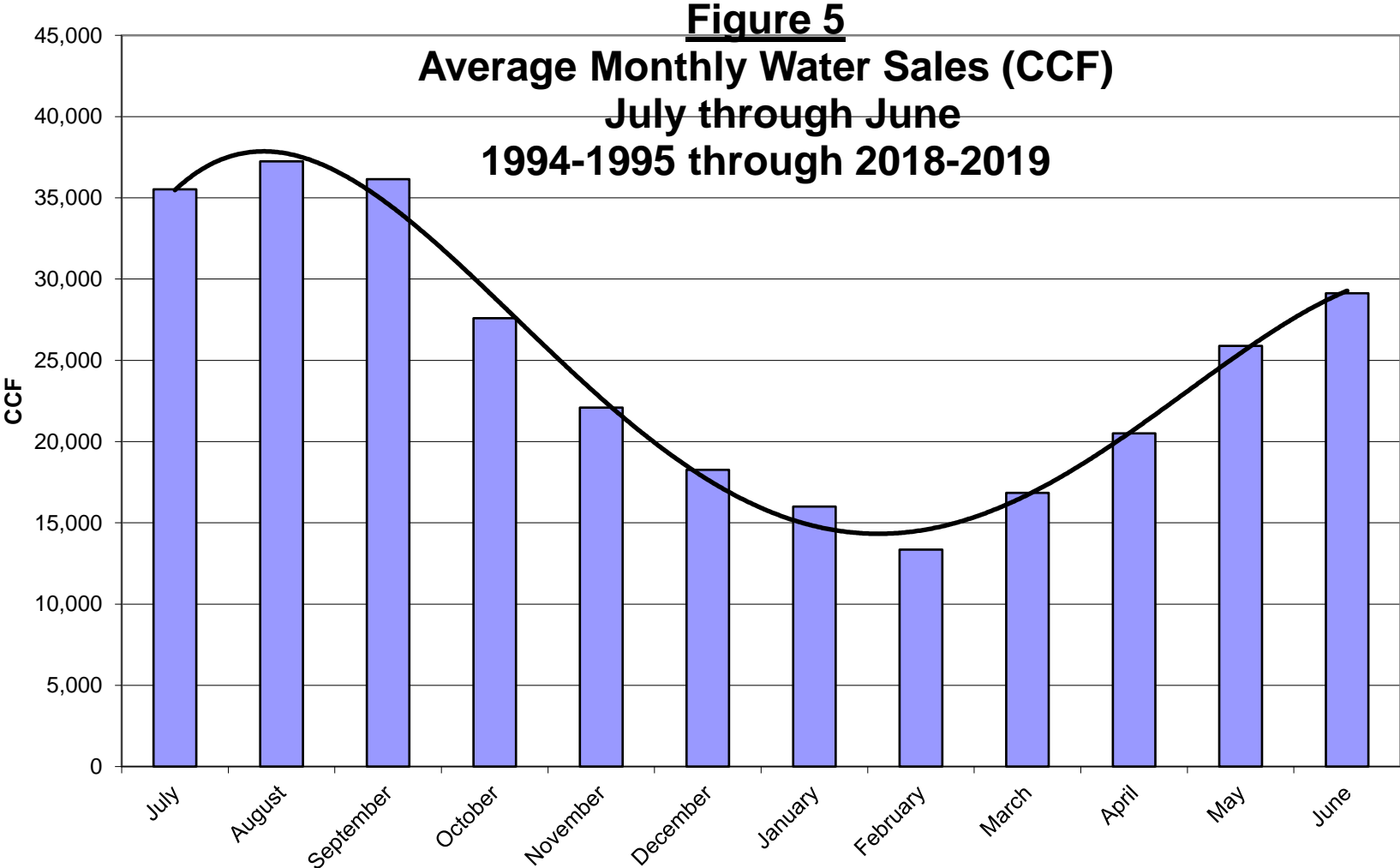


Figure 6
Water Usage per Customer

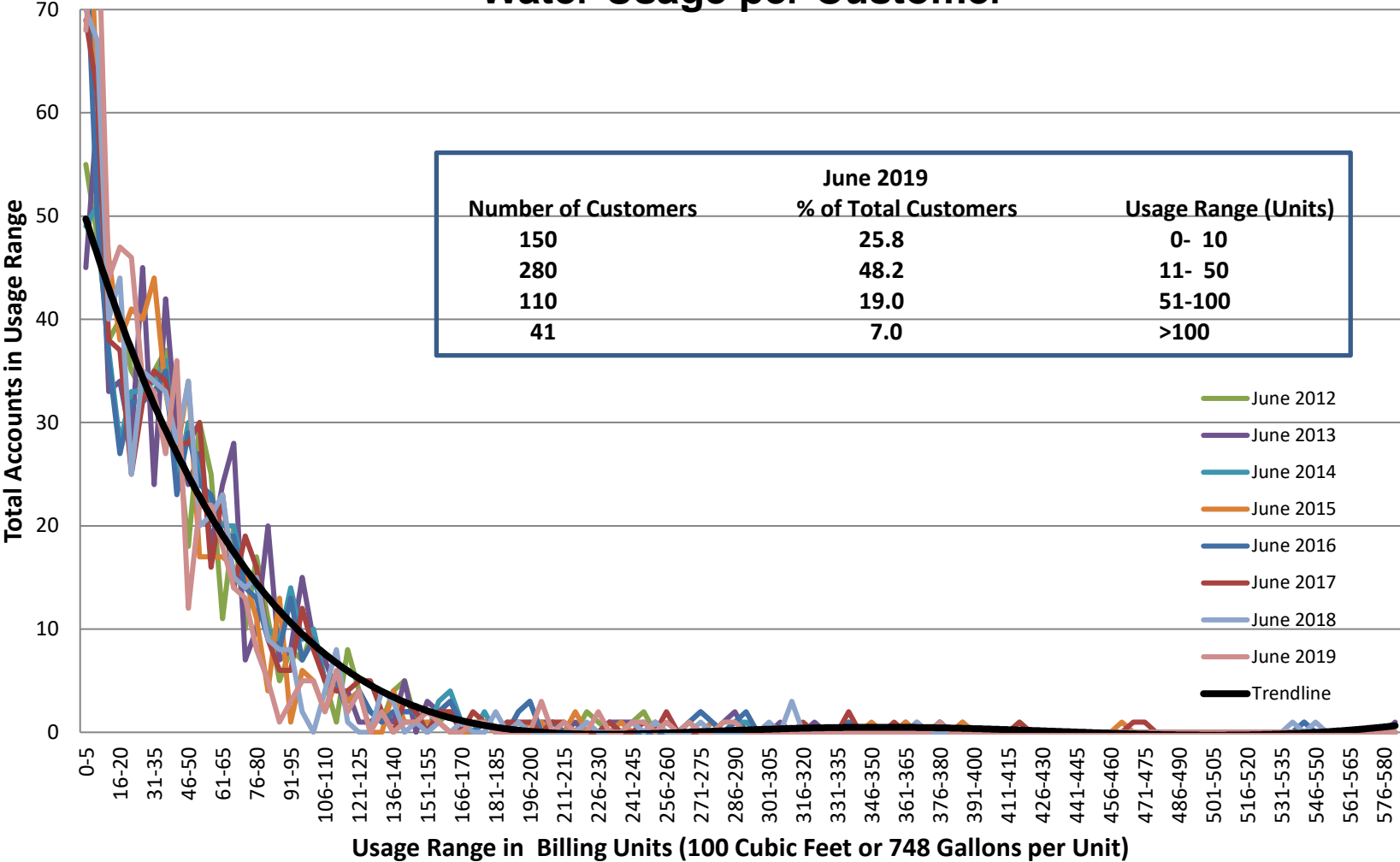
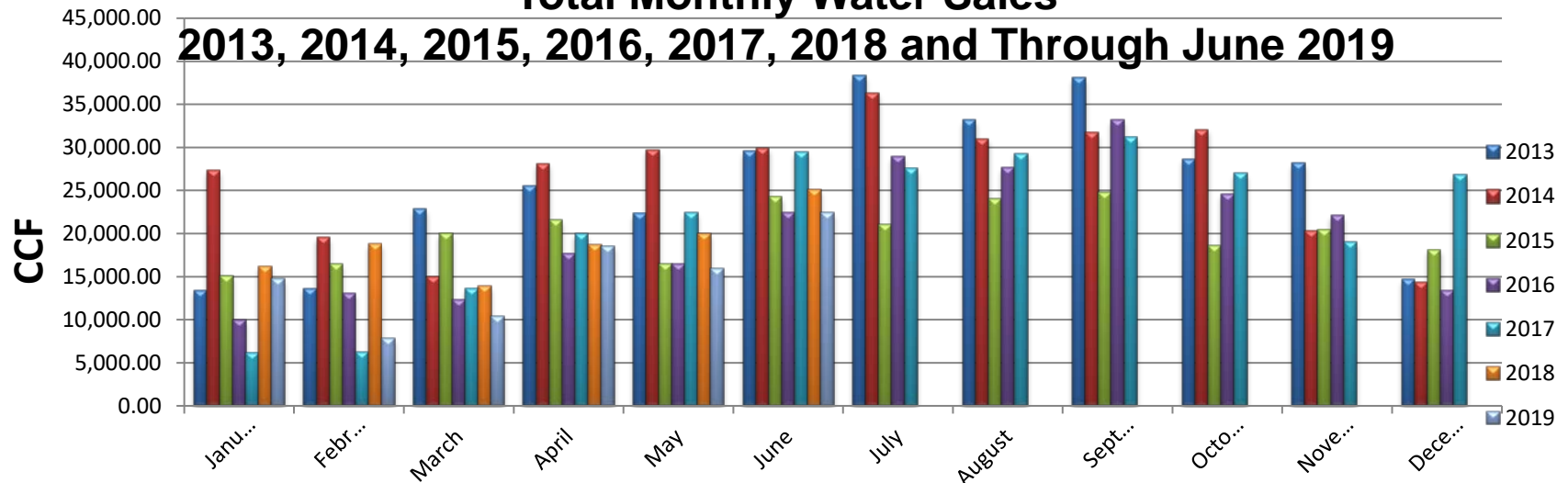


Figure 7
Total Monthly Water Sales



Monthly Unit Sales and Conservation Percentage as Compared to the Previous Year

	2013	2014	%	2015	%	2016	%	2017	%	2018	%	2019	%	2019 to 2013 Percentage
January	13,433.84	27,346.09	103.6%	15,139.14	-44.6%	9,976.03	-34.1%	6,087.44	-39.0%	16,209.81	166.3%	14,799.07	-8.7%	10.2%
February	13,647.60	19,531.19	43.1%	16,426.97	-15.9%	13,087.06	-20.3%	6,260.89	-52.2%	18,825.09	200.7%	7,814.78	-58.5%	-42.7%
March	22,864.75	14,992.66	-34.4%	20,017.80	33.5%	12,329.17	-38.4%	13,607.67	10.4%	13,905.15	2.2%	10,428.68	-25.0%	-54.4%
April	25,580.22	28,144.68	10.0%	21,618.07	-23.2%	17,691.97	-18.2%	19,985.39	13.0%	18,676.28	-6.6%	18,528.34	-0.8%	-27.6%
May	22,344.18	29,731.87	33.1%	16,540.07	-44.4%	16,451.27	-0.5%	22,399.45	36.2%	20,065.74	-10.4%	15,942.43	-20.5%	-28.7%
June	29,605.73	29,878.35	0.9%	24,248.07	-18.8%	22,444.33	-7.4%	29,548.21	31.7%	25,095.13	-15.1%	22,403.98	-10.7%	-24.3%
July	38,314.11	36,366.62	-5.1%	21,045.33	-42.1%	28,938.82	37.5%	27,507.42	-4.9%	29,171.12	6.0%			
August	33,199.17	31,022.84	-6.6%	24,001.09	-22.6%	27,685.37	15.4%	29,322.57	5.9%	31,398.23	7.1%			
September	38,084.37	31,754.34	-16.6%	24,753.39	-22.0%	33,175.96	34.0%	31,192.59	-6.0%	33,153.90	6.3%			
October	28,679.52	32,084.57	11.9%	18,597.68	-42.0%	24,632.13	32.4%	27,026.88	9.7%	23,936.21	-11.4%			
November	28,223.52	20,371.82	-27.8%	20,412.15	0.2%	22,153.05	8.5%	19,043.64	-14.0%	23,302.79	22.4%			
December	14,695.84	14,383.35	-2.1%	18,124.47	26.0%	13,392.46	-26.1%	26,845.02	100.4%	13,968.63	-48.0%			
Total	308,672.85	315,608.38	2.2%	240,924.23	-23.7%	241,957.62	0.4%	258,827.17	7.0%	267,708.08	3.4%	89,917.28		

Figure 8 Rainfall July through June

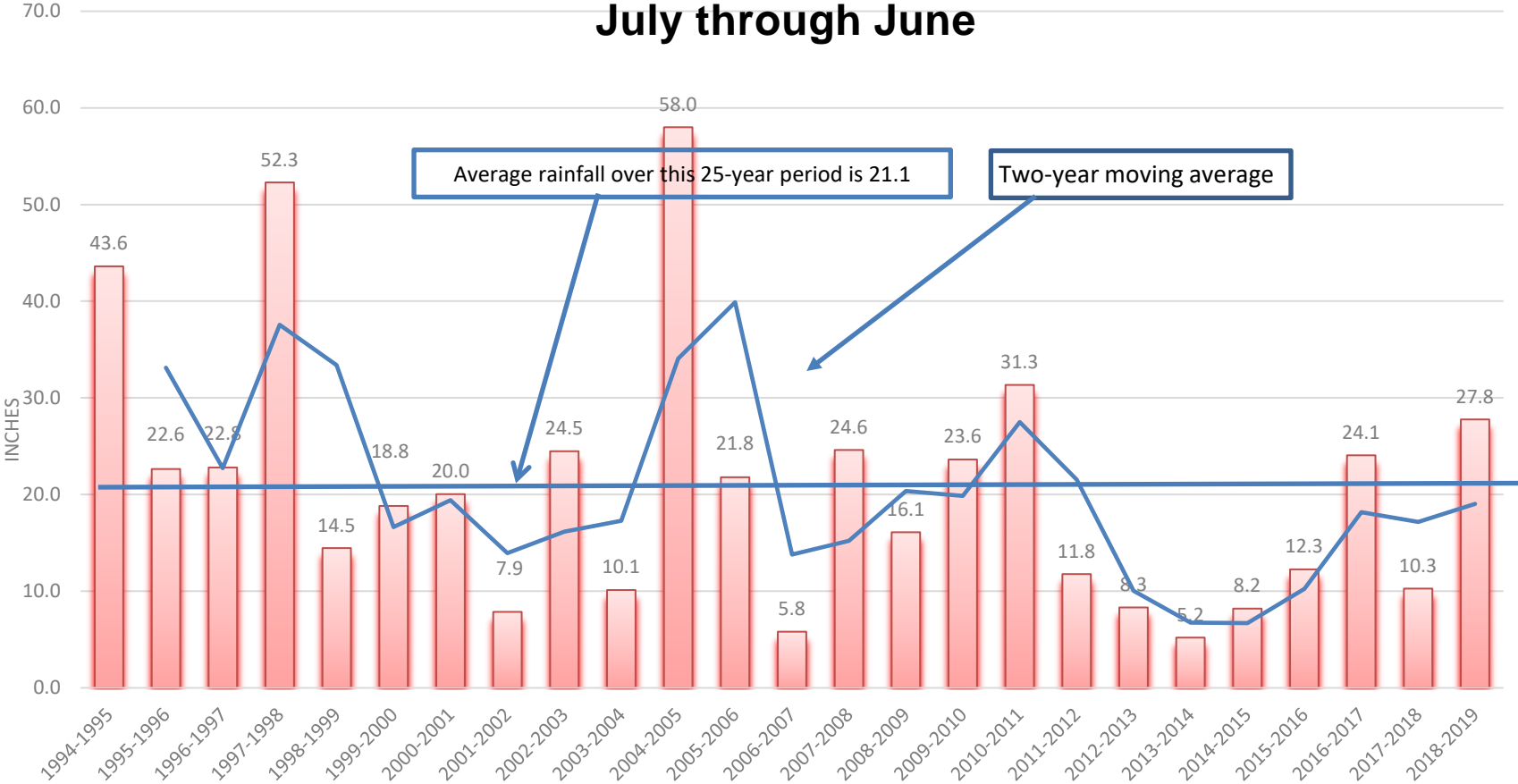


Figure 9
Power Cost in Dollars per Acre-Foot of
Total Production

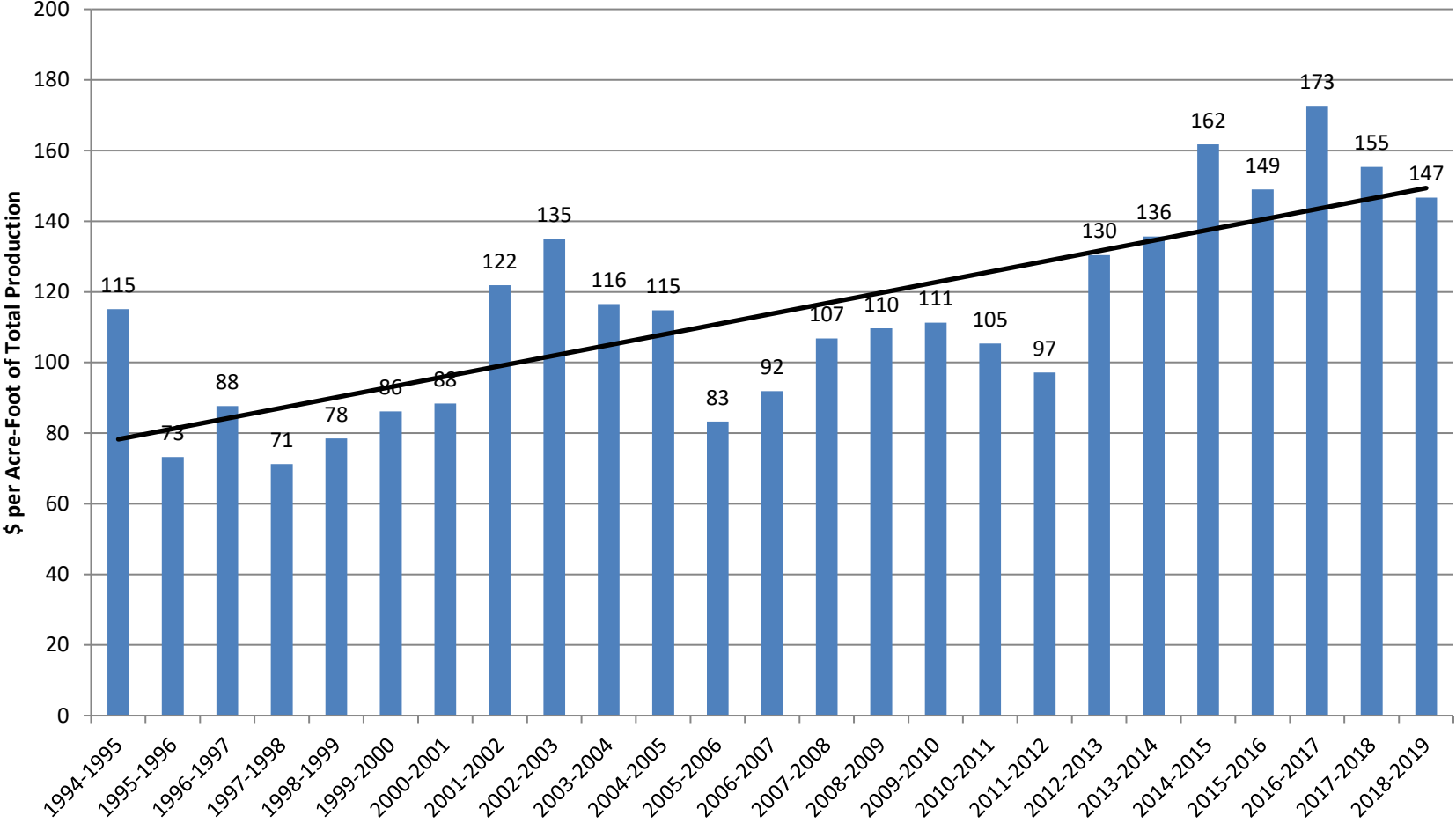


Figure 10
Long Term Storage

