ATTACHMENT A

PASADENA WATER AND POWER

PROPOSED ADJUSTMENTS TO THE WATER RATES

Updated: January 2019

TABLE OF CONTENTS

| 1 | Introduction | 3 |
|-------|--|----|
| 1.1 | Background | 3 |
| 1.2 | Cost of Service Principles | 5 |
| 1.3 | Current Rates | 5 |
| 2 | Financial Forecast | 7 |
| 2.1 | Financial Plan | 7 |
| 3 | Revenue Requirement | 8 |
| 3.1 | Rate Adequacy | 10 |
| 4 | Cost of Service Analysis | 10 |
| 4.1 | Cost of Service Approach | 10 |
| 4.2 | Functionalization / Allocation of Costs | 10 |
| 4.3 | Allocation of Costs by Meter Size | 13 |
| 5 | Proposed Changes to the Water Rates | 13 |
| 5.1.1 | Eliminate the Inside City/Outside City differentials for the Distribution and Custor Charge and the Commodity Charge | |
| 5.1.2 | Eliminate the Inside/Outside city differentials for the CIC | 15 |
| 5.1.3 | Eliminate Seasonal Rates | 15 |
| 5.1.4 | Recommended Rates | 15 |
| 6 | Customer Bill Impact | 16 |
| 7 | APPENDIX A – Projected Water Sales | 17 |
| 7.1 | Projected Water Sales – FY 2019 | 17 |
| 7.2 | Projected Water Sales – FY 2020 | 18 |
| 7.3 | Projected Water Sales - FY 2021 | 19 |
| 8 | APPENDIX B – Proposed Rates and Calculations | 20 |
| 8.1 | Recommended Rates – Distribution and Customer Supporting Calculations | 20 |
| 8.2 | Recommended Rates - Commodity | 22 |
| 8.3 | Recommended Rates – Capital Improvement Charge | 23 |

1 Introduction

This report was prepared to document the results of an internal water cost of service analysis and rate design study completed by the City of Pasadena Water and Power Department ("PWP"). It provides a detailed description of the current water rate structure and the proposed adjustments to the water rates.

The main objectives of the study:

- a) Implement the formal settlement terms approved by the Los Angeles County Superior Court ("Court") in the class-action lawsuit Howard Jarvis Taxpayer Association et al. vs City of Pasadena regarding the rate differential for Commodity Charges and Distribution and Customer ("D&C") charges applied to customers outside of the city limits; and
- b) Develop a fiscally responsible three-year financial plan for the Water Fund to;
 - (i) allocate the revenue requirements to the various customer classes in accordance with the cost of service analysis
 - (ii) evaluate the adequacy of projected D&C and Commodity revenues under existing rates to meet projected revenue requirements; and
 - (iii) make recommendation for D&C and Commodity revenue adjustments as determined by the analysis.

1.1 BACKGROUND

PWP has been distributing water to the City of Pasadena's utility customers since 1912. The area currently served by PWP encompasses approximately 26.2 square miles, including 3.2 square miles that lie outside of the incorporated city boundary, with 37,554 water meter connections. A total of 31,171 meters, or 83% of services, are within the city limits and 6,383 meters, or 17% of services, are outside the city limits. For the period starting July 2017 through June 2018 ("FY 2018"), PWP provided water service to a total population of approximately 170,000.

The major facilities of the water system consist of:

- 17 groundwater wells (of which nine are active) with a production capacity of 33,800 acrefeet per year
- (ii) five imported water connections on the Metropolitan Water District ("MWD") Upper Feeder
- (iii) 110 million gallons of treated water storage capacity in 14 storage reservoirs
- (iv) 19 booster pumping stations supplying 23 unique pressure zones
- (v) 21 chlorination stations
- (vi) 30 pressure reducing stations
- (vii) approximately 520 miles of transmission and distribution pipelines. A majority of the water system infrastructure was installed between 1912 and 1965 and consist largely of unlined cast iron pipelines.

There were several requirements to complete an update of the water cost of service and rate design analysis. First, in October 2018, the City of Pasadena ("City") completed a negotiated settlement of a lawsuit with the Howard Jarvis Taxpayers Association where it was agreed that the City would eliminate the outside city rate differential for the D&C and Commodity Charges within one year.

Within the same year, the City is required to adopt a Capital Improvements Charge rate that eliminates the differential, or, if any differential is imposed on customers of PWP who reside outside the City of Pasadena. The CIC shall be calculated based on bona fide projected costs that the City would not otherwise incur when it makes capital improvements but for the fact such improvements are located in unincorporated County of Los Angeles. In addition, if the approved rates do eliminate the twenty-five percent (25%) surcharge, the City agrees it will not adopt a rate differential for Commodity or D&C charges unless the rationale for the differential applies consistently to customer classes without regard to whether the customers are located inside or outside the city limits. The City also agrees not to base any differential on the theory that inside city customers have superior rights to the City's adjudicated groundwater rights.

Secondly, the continuing statewide drought over the past few years has made it necessary to increase water conservation efforts, and Pasadena's customers have responded favorably. The State had previously imposed a mandatory reduction in consumption, resulting in further reduction in usage. With the continued reduction of approximately 20-30%, the coverage of fixed costs with existing rate revenues is no longer sustainable. The focus of this analysis is on the Commodity charge and the D&C charge because these two rate components provide revenue to support the operating budget of the Water System.

PWP's last cost of service study was conducted in 2008. At the time of the study, the projected five-year water sales averaged approximately 15 million billing units. Actual water sales have been consistently lower than were projected due to the recession that followed completion of the study and the strong response by Pasadena customers to water conservation measures and the continuing statewide drought.

The current view of water consumption for the next several years is one of relatively flat growth (Chart 1). Economic development in Pasadena will elevate consumption but this is expected to be offset by the "new normal" perspective of efficient usage by customers.

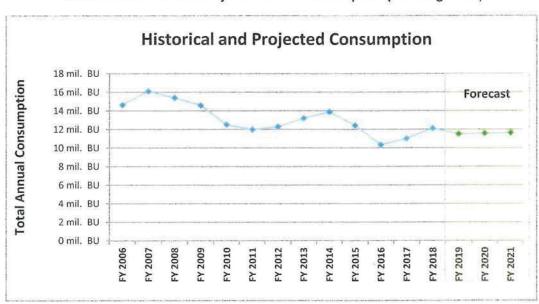


Chart 1: Historical and Projected Water Consumption (in Billing Units)

This document serves as the record for the analysis performed that has led to a recommended water rate update. Policy issues that were reviewed as part of the cost analysis and rate design were:

- Inside/Outside city rate differentials
- Seasonal rates
- · Revenue adequacy and requirements

1.2 COST OF SERVICE PRINCIPLES

In general, water rates must adhere to cost of service principles. PWP's rate setting process conforms to cost of service standards set by the American Water Works Association as follows:

- In providing adequate service to its customers, each utility must receive sufficient total revenue
 to ensure proper operation and maintenance, development and perpetuation of the system,
 and preservation of the utility's financial integrity;
- Development of the rate structure should recover the cost of providing the service to various classes of customers in an equitable manner.

In parallel with the annual budgeting process, PWP conducts an internal analysis of its revenue requirements and cost of service that is consistent with industry-accepted cost of service principles and legal requirements.

1.3 CURRENT RATES

PWP's current rate structure is composed of three water service components: the Commodity charge, the D&C charge, and the CIC. The Commodity charge and CIC are both volumetric charges and the D&C charge is a fixed monthly or bi-monthly charge that varies by meter size. The D&C charge also includes the Fire Protection Surcharge ("FPS"). Currently, all three charges include varied rates for inside and outside city customers; and the Commodity charge and CIC include seasonal winter and summer rates.

Commodity Rates

The current water block allocation and rates are presented below. Table 1 shows the current water block allocations; Table 2 shows the current existing rates Commodity rates.

Table 1: Current Water Block Allocations by Meter Size

| Meter Size | Block 1 | Block 2 | Block 3 | Block 4 |
|---------------|---------|--------------|-----------------|---------|
| 5/8"-3/4" | 0 - 8 | 9 - 24 | 25 - 34 | 35+ |
| 1" | 0 - 12 | 13 - 40 | 41 - 60 | 61+ |
| 1 1/2" | 0 - 22 | 23 - 86 | 87 - 132 | 133+ |
| 2" | 0 - 48 | 49 - 188 | 189 - 290 | 291+ |
| 3" 0-116 | | 117 - 500 | 501 - 860 | 861+ |
| 4" 0 - 225 | | 226 - 1,000 | 1,001 - 1,800 | 1,801+ |
| 6" 0 - 500 | | 501 - 5,600 | 5,601 - 8,800 | 8,801+ |
| 8" 0 - 500 50 | | 501 - 5,600 | 5,601 - 10,000 | 10,001+ |
| 10" | 0 - 500 | 501 - 24,000 | 24,001 - 32,000 | 32,001+ |

The Commodity Charge covers the cost to purchase water from the MWD and to extract groundwater from local supplies. It also recovers the cost of performing water quality testing and treatment to ensure that only the highest quality water is delivered to Pasadena's customers.

Table 2: Current Commodity Rates

| Per BU | Inside City | Outside City |
|---------|-------------|--------------|
| I GI DO | (Area A) | (Area B) |
| | Sur | nmer |
| Block 1 | \$1.39537 | \$1.62296 |
| Block 2 | \$2.98851 | \$3.61438 |
| Block 3 | \$3.48921 | \$4.24026 |
| Block 4 | \$4.24026 | \$5.17907 |
| | Wi | nter |
| Block 1 | \$1.36885 | \$1.58981 |
| Block 2 | \$2.91559 | \$3.52323 |
| Block 3 | \$3,40171 | \$4.13088 |
| Block 4 | \$4.13089 | \$5.04235 |

D&C Rates

The D&C charge recovers the cost of operating and maintaining the infrastructure that treats, stores and reliably delivers water to the City's customers. This includes distribution mains and lateral pipes connecting to individual homes and businesses, pumping stations that boost water across various elevations in the City, and reservoirs where water is stored and treated. The D&C also covers the costs of customer service functions, including the call center services, meter reading, billing and collections. Table 3 shows the current D&C rates.

Table 3: Current D&C Rates

| Makan Cian | Existing Rates | | | | |
|------------|----------------------|-----------------------|--|--|--|
| Meter Size | Inside City (Area A) | Outside City (Area B) | | | |
| 5/8"-3/4" | \$17.13 | \$21.41 | | | |
| 1" | \$32.55 | \$40.68 | | | |
| 1 1/2" | \$65.73 | \$82.17 | | | |
| 2" | \$154.21 | \$192.76 | | | |
| 3" | \$376.95 | \$471.19 | | | |
| 4" | \$582.55 | \$728.18 | | | |
| 6" | \$890.95 | \$1,113.69 | | | |
| 8" | \$1,456.35 | \$1,820.43 | | | |
| 10" | \$1,895.40 | \$2,369.26 | | | |

CIC Rates

The CIC charge includes recover of CIC eligible capital improvement projects as well as recovery of debt service on bonds issued by PWP. Table 4 shows the current CIC rates.

Table 4: Current CIC Rates

| D. DII | Existing Rates | | |
|--------|----------------------|-----------------------|--|
| Per BU | Inside City (Area A) | Outside City (Area B) | |
| Summer | \$0.98506 | \$1.32983 | |
| Winter | \$0.92930 | \$1.25456 | |

2 FINANCIAL FORECAST

2.1 FINANCIAL PLAN

The five-year Financial Plan used for the cost of service analysis is provided below. The study focuses on the first three years of the plan. Table 5 below is the five-year projection.

Table 5: Financial Plan FY 2019 - FY 2023

| | FY 2019 | FY 2020 | FY 2021 | FY 2022 | FY 2023 |
|--|--------------|--------------|--------------|--------------|--------------|
| | Budget | Projected | Projected | Projected | Projected |
| Retail Sales (Billing Unit) | 11,500,000 | 11,557,500 | 11,615,300 | 11,673,400 | 11,731,800 |
| Revenues: | 22 302 | 12 | 9 9 9 9 9 | TANK BELLIN | |
| Distribution and Customer | \$18,952,882 | \$18,952,882 | \$22,386,754 | \$26,145,208 | \$26,645,208 |
| Proposed D&C Rate Increase | \$0 | \$3,147,717 | \$3,758,454 | \$500,000 | \$800,000 |
| Commodity | \$27,664,120 | \$27,802,491 | \$27,881,816 | \$28,501,923 | \$29,649,516 |
| Proposed Commodity (PWAC) Increase | \$0 | \$0 | \$478,249 | \$1,000,000 | \$1,000,000 |
| Non-potable Commodity Sales | \$0 | \$0 | \$0 | \$300,000 | \$600,000 |
| CIC Revenue | \$10,915,741 | \$10,914,292 | \$10,857,807 | \$10,797,554 | \$10,736,120 |
| Proposed CIC Rate Increase / (Decrease) | 33.7-37-1-40 | \$0 | \$0 | \$0 | \$0 |
| Fire Protection Surcharge | \$426,073 | \$426,073 | \$426,073 | \$426,073 | \$426,073 |
| Fire Protection Service | \$1,000,000 | \$1,025,000 | \$1,025,000 | \$1,025,000 | \$1,025,000 |
| Service Connection Fees | \$156,000 | \$156,000 | \$156,000 | \$156,000 | \$156,000 |
| Water Leases | \$283,000 | \$268,850 | \$255,408 | \$242,637 | \$230,505 |
| Total Operating Revenues | \$59,397,816 | \$62,693,305 | \$67,225,561 | \$69,094,395 | \$71,268,423 |
| Operating Expenses: | | 1 44 | -m - # n | | 3 |
| Purchased Water | \$20,312,483 | \$21,138,832 | \$22,006,975 | \$22,930,138 | \$24,002,136 |
| Purchased Power | \$2,587,860 | \$2,593,721 | \$2,614,800 | \$2,636,600 | \$2,662,106 |
| - Pumping (Commodity) | \$1,221,177 | \$1,223,943 | \$1,233,890 | \$1,244,177 | \$1,256,213 |
| - Boosting (D&C) | \$1,366,683 | \$1,369,778 | \$1,380,910 | \$1,392,423 | \$1,405,893 |
| Direct Operating Expenses | \$11,031,126 | \$11,378,239 | \$11,722,765 | \$12,022,156 | \$12,329,483 |
| - Commodity | \$3,433,040 | \$3,539,277 | \$3,648,933 | \$3,742,124 | \$3,837,785 |
| - Distribution and Customer | \$7,598,086 | \$7,838,962 | \$8,073,833 | \$8,280,032 | \$8,491,698 |
| General & Administrative Expenses | \$14,099,356 | \$14,543,016 | \$14,993,595 | \$15,376,520 | \$15,769,596 |
| - Commodity | \$1,473,868 | \$1,521,027 | \$1,568,152 | \$1,608,201 | \$1,649,312 |
| - Distribution and Customer | \$12,625,488 | \$13,021,990 | \$13,425,443 | \$13,768,319 | \$14,120,283 |
| Non-potable Commodity and O&M | \$0 | \$0 | \$0 | \$300,000 | \$600,000 |
| Interest Expense | \$3,272,510 | \$4,066,957 | \$4,016,831 | \$3,976,999 | \$3,827,078 |
| - Distribution and Customer | \$491,189 | \$466,044 | \$448,380 | \$428,289 | \$409,319 |
| - CIC | \$2,781,321 | \$3,600,913 | \$3,568,452 | \$3,548,711 | \$3,417,759 |
| Depreciation and Amortization | \$7,635,771 | \$7,788,486 | \$7,944,256 | \$8,103,141 | \$8,265,204 |
| Total Operating Expenses | \$58,939,106 | \$61,509,252 | \$63,299,223 | \$65,345,554 | \$67,455,602 |
| Operating Income | \$458,710 | \$1,184,053 | \$3,926,338 | \$3,748,841 | \$3,812,821 |
| Non-Operating Revenue | \$5,364,079 | \$5,838,568 | \$5,828,209 | \$5,505,517 | \$3,933,009 |
| Income Before Fund Reimb. from Water Services | \$5,822,789 | \$7,022,621 | \$9,754,547 | \$9,254,358 | \$7,745,830 |
| Reimbursement to General Fund | \$1,894,139 | \$1,894,139 | \$1,894,139 | \$1,894,139 | \$1,894,139 |
| Net Income | 62 020 050 | ¢E 400 400 | 67.000.400 | 67 200 240 | 65 054 CO4 |
| Net Income | \$3,928,650 | \$5,128,482 | \$7,860,408 | \$7,360,219 | \$5,851,691 |

The financial outlook includes growth in operating expenses largely due to increases in purchased water from MWD and personnel and internal service charges incurred by the utility.

The Commodity and D&C operating expenses are expected to increase for FY 2019 through FY 2021 as shown in Table 6.

Table 6: FY 2019 – FY 2021 D&C and Commodity Operating Expenses

| Expense Type | FY 2019 | FY 2020 | FY 2021 |
|-------------------------|--------------|--------------|--------------|
| Distribution & Customer | \$31,208,721 | \$31,964,399 | \$32,751,961 |
| Commodity | \$26,442,353 | \$27,423,078 | \$28,457,949 |
| Totals | \$57,651,074 | \$59,387,478 | \$61,209,910 |

Due to the timing of the cost of service analysis, the FY 2019 approved Water Fund budget was used as the base year for the analysis. The calculations and forecasts are based on a reasonable projection of existing service costs, water demands, and system operations using available information, and on existing legal requirements. The projected water sales used for the study are provided in Appendix A. Significant changes in PWP's operations or California water law, or further regulatory actions by the Governor or the State Water Resources Control Board in regard to water use may require the Water System to revisit the cost of service analysis in the near future.

3 REVENUE REQUIREMENT

Staff analyzed PWP's water rate revenues individually to assess the ability of each to meet its revenue requirement. The analysis compared the forecasted revenues generated from each rate to its forecasted operating and maintenance costs in order to determine the rates adequacy to recover the utility's costs. Tables 7 and 8 provides the details of the rate revenues expected from D&C, Commodity, as well as the related allocated expenses for FY 2019 through FY 2021.

Table 7: Net Revenue Requirement - D&C

| Cost of Service | FY 2019 Budget | FY 2020 Projected | FY 2021 Projected |
|---------------------------------|-------------------|----------------------|----------------------|
| Distribution and Customer | | | |
| Purchased Power | \$1,366,683 | \$1,369,778 | \$1,380,910 |
| Direct Operating Expense | \$7,604,100 | \$7,838,962 | \$8,073,833 |
| General & Administrative | \$12,631,839 | \$13,021,990 | \$13,425,443 |
| Interest Expense | \$491,189 | \$466,044 | \$448,380 |
| Depreciation and Amortization | \$7,635,771 | \$7,788,486 | \$7,944,256 |
| Reimbursement to General Fund | \$1,894,139 | \$1,894,139 | \$1,894,139 |
| Less: Fire Protection Surcharge | (\$415,000) | (\$415,000) | (\$415,000) |
| Total D&C Cost of Service | \$31,208,721 | \$31,964,399 | \$32,751,961 |

Table 7: Net Revenue Requirement - D&C (cont'd)

| D&C Cost of Service | \$31,208,721 | \$31,964,399 | \$32,751,961 |
|---|---------------|---------------|---------------|
| Less: Non-Op. Inc Invest Earnings | (\$472,128) | (\$442,050) | (\$422,933) |
| Less: Non-Op. Inc Private Fire Service | (\$1,000,000) | (\$1,025,000) | (\$1,025,000) |
| Less: Non-Op. Inc Service Connect. Fee | (\$156,000) | (\$156,000) | (\$156,000) |
| Less: Non Op. Inc Depreciation | (\$7,635,771) | (\$7,788,486) | (\$7,944,256) |
| Add: Capital Fund Needs (PAYGO) | \$1,621,927 | \$1,833,891 | \$1,941,436 |
| Net D&C Revenue Requirement | \$23,566,750 | \$24,386,754 | \$25,145,208 |
| D&C Revenue Collection | \$18,952,882 | \$22,088,913 | \$26,145,208 |
| Revenue Sufficiency | (\$4,613,868) | (\$2,297,841) | \$1,000,000 |

Table 8: Net Revenue Requirement - Commodity

| Cost of Service | FY 2019 Budget | FY 2020 Projected | FY 2021 Projected |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| Commodity | | | |
| Purchased Water | \$20,312,483 | \$21,138,832 | \$22,006,975 |
| Purchased Power | \$1,221,177 | \$1,223,943 | \$1,233,890 |
| Direct Operating Expense | \$3,433,237 | \$3,539,277 | \$3,648,933 |
| General & Administrative | \$1,475,455 | \$1,521,027 | \$1,568,152 |
| Total Commodity Cost of Service | \$26,442,353 | \$27,423,078 | \$28,457,949 |
| Commodity Net Revenue Requiremen Commodity Cost of Service | t \$26,442,353 | \$27,423,078 | \$28,457,949 |
| Less: Non Op Inc Invest Earnings | (\$182,034) | (\$140,878) | (\$113,619) |
| Net Commodity Revenue | | | Ü |
| Requirement | \$26,260,319 | \$27,282,201 | \$28,344,330 |
| J.그렇다() 여기 두 100 전 1 | \$26,260,319 \$27,664,120 | \$27,282,201 \$27,802,491 | \$28,344,330 \$28,360,065 |

The net revenue requirement is the sum of the Operating Budget expenses, minus non-cash expenditures (Depreciation), plus the capital fund needs (funds that are not recovered through the CIC), and offset by the non-rate related revenues and income. The difference between the expected revenue collected through the rate and its revenue requirement shows the adequacy of each existing rate.

PWP's distribution costs pertain to pumping, distribution, and storage costs incurred to deliver each unit of water. Customer costs are fixed expenditures that relate to operational support activities including customer service, billing, administrative, and technical support. In accordance with PWP's Water Rate Ordinance, these costs should be recovered through the D&C charge. PWP has two water sources, groundwater and water purchased from the MWD. In accordance with PWP's Water Rate Ordinance, the Commodity charge should recover the costs of purchased water, purchased water administration, and groundwater delivery.

The CIC is not included in the analysis above. The CIC revenue requirement is calculated based on the five-year capital improvement plan and projected debt service requirements.

3.1 RATE ADEQUACY

Based on the revenue requirement analysis of the FY 2019 adopted operating budget, the revenue collected from the existing D&C charge under-collects its revenue requirement by about \$4.6 million. Revenue collected from the existing commodity charge over-collects its revenue requirement by about \$1.4 million. This is a result of a shift in resources from maintenance work on water well pumps to distribution work, and changes in actual costs versus the projections built into the 2008 cost of service analysis.

This cost of service analysis of the FY2019 operating budget provides the foundation for developing rates that are expected to generate adequate revenues by FY 2021.

4 COST OF SERVICE ANALYSIS

4.1 COST OF SERVICE APPROACH

Rate analyses are performed by PWP staff each fiscal year in order to establish the adequacy of the existing cost recovery levels to provide system revenues sufficient to fund utility operations, maintenance, and for future replacement and enhancement of capital needs. PWP utilizes the "cash needs" approach for projecting revenue requirements to ensure that utility revenues are sufficient to recover total cash needs. The methodology that PWP applies to establish annual rate revenue needs is consistent with industry standards established by the Principles of Water Rates, Fees and Charges: Manual of Water Supply Practices M1 (the "M1 Manual"), which is published by the American Water Works Association (AWWA). AWWA is a national industry trade group that makes recommendations on generally accepted practices in the water industry.

The services of Colantuono, Highsmith & Whatley, PC ("Colantuono") were procured to review each component of PWP staff analyses in order to validate the appropriateness of revenue requirements and cost of service allocations. Colantuono found the allocation methodology that PWP has developed is thorough, in line with industry standard practices and is Proposition 218 compliant.

4.2 Functionalization / Allocation of Costs

To determine the appropriate allocation of costs to each of PWP's rate elements, PWP staff reviewed costs, interviewed Water Division engineering and operations staff responsible for the associated activity (e.g. Source of Supply, Pumping and Boosting, Distribution, etc.). Costs were classified and allocated based on current and projected work plans which established the revenue requirement for each of the rate elements with updated expectations of how costs will be incurred.

The cost classification factors determined as a result of the analysis are presented in Table 9. These cost classification factors were applied to the most granular level of detail in the accounting records, the Public Utility Commission ("PUC") account level. The following allocation percentages were applied to the specified expense grouping to determine the allocation of the operating budget into their Commodity or D&C categories.

Table 9: Cost Classification Factors

| Operations & Maintenance Account | Commodity | Transmission & Distribution | Customer | Total |
|-------------------------------------|-----------|-----------------------------|----------|-------|
| SOURCE OF SUPPLY | | | | |
| Supervision & Engineering-Supply | 41% | 59% | | 100% |
| Labor & Expense-Supply | 41% | 59% | | 100% |
| Misc. Expense-Supply | 100% | | | 100% |
| Purchased Water | 100% | | | 100% |
| Maint. of Structures-Supply | 100% | | | 100% |
| Maint. of Springs/Tunnels-Supply | 100% | 3 311112-1113-11 | | 100% |
| Maint. of Wells-Supply | 100% | | | 100% |
| Maint. of Mains-Supply | 100% | | | 100% |
| PUMPING EXPENSES | | | | |
| Operation Supv'n & Eng'g-Pump | 6% | 94% | | 100% |
| Labor & Expense-Pump | 6% | 94% | | 100% |
| Miscellaneous Expense-Pump | 100% | | | 100% |
| Fuel/Power Purchased for Pumping | 47% | 53% | | 100% |
| Maint. of Struct. & Improvem-Pump | 100% | | | 100% |
| Maint. of Pumping Equip-Pump | 100% | | | 100% |
| WATER TREATMENT | | | | |
| Supervision & Engineering-Wtr.Treat | 92% | 8% | | 100% |
| Labor And Expenses-Wtr.Treat | 92% | 8% | | 100% |
| Misc Expense-Wtr.Treat | 100% | | | 100% |
| Chemicals & Filters-Wtr.Treat | 100% | | | 100% |
| Maint. Struct. & ImprWtr.Treat | 92% | 8% | | 100% |
| Maint. Water Treatment Equip | 100% | | | 100% |
| TRANSMISSION & DISTR. | | | | |
| Supervision & Engineering- | | | | |
| Trans/Distr | 3% | 97% | | 100% |
| Transmission & Distribution Lines | 3% | 97% | | 100% |
| Cust. Installation ExpTrans/Distr | 3% | 97% | | 100% |
| Misc. Expense-Trans/Distr | | 100% | | 100% |
| Misc. & Maint. Struct. & ImprT&D | | 100% | | 100% |
| Maint. Reservirs&Tanks-Trns/Dist | | 100% | | 100% |
| Maint.Trans. & Distr | | 100% | | 100% |
| Maint. of Meters / Services- | | | | |
| Trans/Distr | | 100% | | 100% |
| Maint. & Misc. Plant-Trans/Distr | | 100% | | 100% |
| Merch. & Jobbing-Trans/Distr | | 100% | | 100% |
| Six Inch F.H.Install-Trns/Dist | | 100% | | 100% |
| Fire Hydrant Heads-Trans/Distr | | 100% | | 100% |
| Fire Dept. Charges-Trans/Distr | | 100% | | 100% |
| Hydrant Upgr./HeavyMain-TrnDist | | 100% | | 100% |

Table 9: Cost Classification Factors (cont'd)

| Operations & Maintenance Account | Commodity | Transmission & Distribution | Customer | Total |
|---|--|-----------------------------|----------------|-------|
| CUSTOMER ACCT EXPENSES | | | | |
| Customer Account Expenses | | | 100% | 100% |
| SALES EXPENSES | | | | |
| Sales Expenses | | | 100% | 100% |
| ADMIN & GENERAL EXPENSES | | | | |
| Administrative & Gen. Salaries | The Control of the Co | 30% | 70% | 100% |
| Office Supplies & Other Expense | | 30% | 70% | 100% |
| Property Insurance / Injuries & Damages | | 30% | 70% | 100% |
| Franchise Requirements | | 30% | 70% | 100% |
| Outside Services Employed-A&G | 20% | 30% | 50% | 100% |
| Misc. General Exp Adm & Gen | | 30% | 70% | 100% |
| Maint. Of Gen Plant - Adm &Gen | | 30% | 70% | 100% |
| Rent Expense – Misc. | | 30% | 70% | 100% |
| Conservation Expense – Adm. &Gen. | 100% | | ALL PROCESSING | 100% |
| Transportation Exp Adm. & Gen. / Cust. | | 30% | 70% | 100% |
| Division Applied Material Offset | | 30% | 70% | 100% |
| Division Applied Equip offset | | 30% | 70% | 100% |

Table 10 below shows the allocation of the FY 2019 operating budget by function.

Table 10: Allocation of FY 2019 Budget

| Budget Item | Commodity | D&C | CIC | Total |
|------------------------|--------------|--------------|--|--------------|
| Purchased Water | \$20,312,483 | | | \$20,312,483 |
| Purchased Power | \$1,221,177 | \$1,366,683 | | \$2,587,860 |
| Operating Expenses | | | 11 | |
| Source of Supply | \$625,774 | \$730,309 | | \$1,356,083 |
| Pumping | \$298,808 | \$896,846 | | \$1,195,654 |
| Water Treatment | \$2,409,657 | \$151,559 | 11.10.10.10.10.10.10.10.10.10.10.10.10.1 | \$2,561,216 |
| Trans & Distribution | \$98,801 | \$5,819,373 | | \$5,918,174 |
| Total Operating Exp. | \$3,433,040 | \$7,598,087 | | \$11,031,127 |
| Admin. & General | | 30-30 | 1815.81.00 | |
| Customer Expenses | | \$1,784,256 | | \$1,784,256 |
| Sales Expense | 372 | \$974,430 | | \$974,430 |
| A&G – Conservation | \$748,614 | | THE USE | \$748,614 |
| A&G - Other | \$725,254 | \$9,866,802 | | \$10,592,056 |
| Total Admin. & General | \$1,473,868 | \$12,625,488 | | \$14,099,356 |
| Interest Expense | | \$491,189 | \$2,781,321 | \$3,272,510 |
| Reimbursement to GF | | \$1,894,138 | | \$1,894,138 |
| Depreciation | | \$7,635,771 | | \$7,635,771 |
| Grand Total | \$26,440,568 | \$31,611,356 | \$2,781,321 | \$60,833,245 |

4.3 ALLOCATION OF COSTS BY METER SIZE

Conversion of meter connection sizes to meter equivalents using the hydraulic capacity percentage provides a unit basis for assessing the demand and stress that each account places on the distribution system. Application of the conversion helps to identify the total potential quantity of water that can flow through each meter size.

The total equivalent meters is determined by taking the hydraulic capacity factor times the number of meters within each size category. Costs are allocated based on the percentage share of the specific size as a fraction of the total sum of all meters. For example, using a 1-inch meter, its percentage is 22,536 / 89,734 = 25.114%. Next, applying 25.114% to \$18,952,882 = D&C cost allocation of \$4,759,800.

Table 11 shows the conversion of meter sizes to meter equivalents and the allocation of the proposed June 1, 2019 Distribution and Customer costs of \$18,952,882. The monthly rate calculated in the last column is the D&C Cost Allocation, divided by the number of Accounts, divided by 12 months.

Table 11: Calculation of Equivalent Meters

| Meter Hydraulic Size Capacity % | | # of Connections | Total Equivalent Meters | D&C Cost Allocation | Monthly D&C Rate \$17.60 | |
|---------------------------------|---------|------------------|----------------------------|------------------------|--------------------------------|--|
| 5/8" - 3/4" | 1.0 | 21,133 21,133 | | \$4,463,540 | | |
| 1" | 1.9 | 11,861 | 22,536 | \$4,759,869 | \$33.44 | |
| 1 1/2" | 3.9 | 2,198 | 8,572 | \$1,810,508 | \$68.64 | |
| 2" | 9.0 | 1,741 | 15,669 | \$3,309,478 | \$158.41 | |
| 3" | 22.0 | 252 | 5,544 | \$1,170,958 | \$387.22 | |
| 4" | 33.8 | 228 | 7,706 | \$1,627,598 | \$594.88 | |
| 6" | 52.2 | 107 | 5,585 | \$1,179,618 | \$918.71 | |
| 8" | 8" 84.9 | | 2,547 | \$537,957 | \$1,494.33 | |
| 10" | 110.5 | 4 | 442 | \$93,356 | \$1,944.92 | |
| Totals | | 37,554 | 89,734 | \$18,952,882 | | |

5 PROPOSED CHANGES TO THE WATER RATES

To meet the projected revenue requirements, staff is proposing revenue increases for the three-year period FY 2019 through FY 2021. Table 12 and Table 13 shows the projected D&C and Commodity rate plan actions and the associated revenues.

Table 12: FY 2019 - FY 2021 D&C and Commodity Rate Plan Actions

| Revenue Type | FY 2019 | FY 2020 | FY 2021 |
|-------------------------|---------|-------------|-------------|
| Distribution & Customer | \$0 | \$3,136,031 | \$3,766,454 |
| Commodity | \$0 | \$0 | \$478,249 |
| Totals | \$0 | \$3,136,031 | \$4,244,703 |

Table 13: FY 2019 - FY 2021 Proposed D&C and Commodity Rate Plan Revenues

| Revenue Type | FY 2019 | FY 2020 | FY 2021 |
|-------------------------|--------------|--------------|--------------|
| Distribution & Customer | \$18,952,882 | \$22,088,913 | \$26,145,208 |
| Commodity | \$27,664,120 | \$27,802,491 | \$28,360,066 |
| Totals | \$46,617,002 | \$49,891,404 | \$54,505,274 |

The recommended revenue increases are the minimum amount and intended to minimize the "rate shock" impacts associated with the rate redesign, the removal of the Inside/Outside rate differential, and the increased Operating and Maintenance ("O&M") costs. The proposed rate plan will result in revenue shortfall of \$3.2 million in FY 2019 and \$1.5 million in FY 2020. The gap between the revenue requirements and the rate revenues is projected to decrease over the next two years, and the funds are projected to generate positive cash flow by the end of FY 2021. Staff will closely monitor the financial results of these increases and the subsequent financial outlook. If PWP incurs unforeseen costs, additional revenue increases may be required.

In summary, PWP is proposing the following changes to its water rate structure in order to comply with the legal settlement, to simplify water rates, and to ensure that rate revenues are sufficient to sustain the Water System:

- · Eliminate the Inside/Outside city differentials for the D&C and Commodity Charges
- · Eliminate the Inside/Outside city differentials for the CIC
- · Eliminate seasonal rates
- Update the Commodity charge
- Update the D&C charge
- Update the CIC

5.1.1 Eliminate the Inside City/Outside City differentials for the Distribution and Customer Charge and the Commodity Charge

The existing rate structure assigns a 25% rate differential the D&C and Commodity charges to customers who require water service outside of the city limits. As a result of October 2018 settlement, PWP is proposing to discontinue the practice of charging a differential for the D&C, Commodity, and the CIC charges to water customer water customers outside of city limits. The updated rates have been determined through an equitable allocation of costs to customers, regardless of their service area. Table 14 shows the proposed D&C rates and Table 15 shows the proposed Commodity rates.

Table 14: Proposed D&C Monthly Rates

| | June 1, 2019 | August 1, 2019 | July 1, 2020 | | |
|------------|-------------------------------|-------------------------------|-------------------------------|--|--|
| Meter Size | Inside / Outside Areas A/B | Inside / Outside Areas A/B | Inside / Outside Areas A/B | | |
| 5/8"-3/4" | \$17.60 | \$20.79 | \$24.28 | | |
| 1" | \$33.44 | \$39.50 | \$46.13 | | |
| 11/2" | \$68.64 | \$81.08 | \$94.69 | | |
| 2" | \$158.42 | \$187.11 | \$218.54 | | |
| 3" | \$387.26 | \$457.39 | \$534.18 | | |
| 4" | \$594.93 | \$702.67 | \$820.64 | | |
| 6" | \$918.77 | \$1,085.17 | \$1,267.37 | | |
| 8" | \$1,494.41 | \$1,765.08 | \$2,061.45 | | |
| 10" | \$1,944.97 | \$2,297.34 | \$2,683.01 | | |

Table 15: Proposed Commodity Rates

| | June 1, 2019 | August 1, 2019 | July 1, 2020 |
|--|---------------------------------|---------------------------------|---------------------------------|
| Per BU | Inside / Outside Areas A / B | Inside / Outside Areas A / B | Inside / Outside Areas A / B |
| | Summer | All Se | asons |
| Block 1 | \$1.42537 | \$1.41199 | \$1.44852 |
| Block 2 | \$3.07344 | \$3.03984 | \$3.07637 |
| Block 3 | \$3.60377 | \$3.56962 | \$3.60615 |
| Block 4 | \$4.38395 | \$4.33916 | \$4.37569 |
| ************************************* | Winter | | NH-552 |
| Block 1 | \$1.39801 | | |
| Block 2 | \$2.99570 | | |
| Block 3 | \$3.51934 | | |
| Block 4 | \$4.27991 | | |

5.1.2 Eliminate the Inside/Outside city differentials for the CIC

The existing rate structure assigns a 35% rate differential to the CIC to customers who require water service outside of the city limits. Settlement of the lawsuit regarding the D&C charge and Commodity charge includes the differentials applied to the CIC charge. The City may impose a CIC charge on customers who reside outside of the city limits, but such a charge must be calculated based on a bona fide projected cost the City would not otherwise incur when it make capital improvements but for the fact such improvements are located in the unincorporated County of Los Angeles. Table 16 below presents the proposed CIC rates.

Table 16: Proposed CIC Rates

| | Revenue | Sales | CIC Rate \$/BU |
|--------------------|---------------------------|------------------------------|----------------|
| June 1, 2019 – Eli | minate Inside / Outside D | ifferentials | |
| Summer | \$5,836,100 | 5,656,130 | \$1.03182 |
| Winter | \$4,615,969 | 4,743,870 | \$0.97304 |
| Winter | | THE PERSON NAMED IN COLUMN 1 | |
| ist 1, 2019 – I | \$10,452,069 | 10,400,000 | \$1.00501 |

5.1.3 Eliminate Seasonal Rates

PWP recommends replacing seasonal rates with a normalized rate that will be revenue neutral and will have no fiscal impact on the utility. The new normalized rates for Commodity and CIC are shown in Tables 15 and 16 respectively. It will simplify rates and will make it easier for customers to budget monthly use and expected billing.

5.1.4 Recommended Rates

This proposal will maintain all existing customer classification and will continue water allocations based on meter size. PWP will continue the methodology of calculating the D&C charge based on the capacity factor of each meter connection size, following standard industry practices. PWP will also maintain the existing water block pricing structure for both Commodity and D&C, including the purchase water

adjustment mechanism used to pass-through incremental water costs. The detail of the recommended rates are provided in Appendix 2.

6 CUSTOMER BILL IMPACT

The customer bill impacts of the proposed changes to the water rates are provided in Table 17 and Table 18 below.

Table 17: Monthly Customer Bill Impact – Inside City customers

| Makaa | Nontract | Avg. | Mandala | June 1, | 2019 | August 1, 2019 | | July 1, 2020 | | 3 Year Total | |
|---------------|------------------------|------------------|--------------------|----------|-----------|----------------|-----------|--------------|-----------|--------------|-----------|
| Meter Size | Number of Customers | Monthly Usage | Monthly Billing | \$ chg. | % chg. | \$ chg. | % chg. | \$ chg. | % chg. | \$ chg. | % chg. |
| 5/8 & 3/4 | 16,996 | 11 | \$48.47 | \$1.48 | 3.1% | \$2.69 | 5.4% | \$3.89 | 7.4% | \$8.07 | 16.6% |
| 1" | 10,012 | 17 | \$81.58 | \$2.57 | 3.2% | \$5.28 | 6.3% | \$7.27 | 8.1% | \$15.10 | 18.5% |
| 1½" | 1,935 | 32 | \$160.32 | \$6.11 | 3.8% | \$10.80 | 6.5% | \$14.94 | 8.4% | \$31.68 | 19.8% |
| 2" | 1,641 | 59 | \$315.41 | \$9,56 | 3.0% | \$26.10 | 8.0% | \$33.61 | 9.6% | \$69.27 | 22.0% |
| 3" | 235 | 143 | \$767.97 | \$23.30 | 3.0% | \$63.85 | 8.1% | \$82.14 | 9.6% | \$169.29 | 22.0% |
| 4" | 220 | 251 | \$1,230.53 | \$33.58 | 2.7% | \$97.15 | 7.7% | \$127.35 | 9.4% | \$258.08 | 21.0% |
| 6" | 99 | 463 | \$2,015.09 | \$63.36 | 3.1% | \$147.83 | 7.1% | \$199.41 | 9.0% | \$410.60 | 20.4% |
| 8" | 29 | 620 | \$3,150.51 | \$94.61 | 3.0% | \$243.38 | 7.5% | \$319.52 | 9.2% | \$657.51 | 20.9% |
| 10" | 4 | 2,608 | \$11,458.66 | \$406.99 | 3.6% | \$205.15 | 1.7% | \$481.48 | 4.0% | \$1,093.62 | 9.5% |

Table 18: Monthly Customer Bill Impact - Outside City customers

| Mater | Management | Avg. | Manakhi | June 1 | , 2019 | August 1 | 1, 2019 | July 1, | 2020 | 3 Year | Total |
|---------------|------------------------|------------------|--------------------|------------|--------|----------|-----------|----------|-----------|------------|--------------|
| Meter Size | Number of Customers | Monthly Usage | Monthly Billing | \$ chg. | % chg. | \$ chg. | % chg. | \$ chg. | % chg. | \$ chg. | % chg. |
| 5/8 & 3/4 | 4,137 | 11 | \$60.24 | (\$10.29) | -17.1% | \$2.69 | 5.4% | \$3.89 | 7.4% | (\$3.71) | -6.2% |
| 1" | 1,849 | 17 | \$101.53 | (\$17.38) | -17.1% | \$5.28 | 6.3% | \$7.25 | 8.1% | (\$4.85) | -4.8% |
| 11/2" | 263 | 32 | \$199.25 | (\$32.82) | -16.5% | \$10.80 | 6.5% | \$14.77 | 8.4% | (\$7.25) | -3.6% |
| 2* | 100 | 59 | \$392.33 | (\$67.36) | -17.2% | \$26.10 | 8.0% | \$33.61 | 9.6% | (\$7.65) | -1.9% |
| 3" | 17 | 143 | \$955.34 | (\$164.07) | -17.2% | \$63.85 | 8.1% | \$82.14 | 9.6% | (\$18.08) | -1.9% |
| 4* | 8 | 251 | \$1,530.69 | (\$266.58) | -17.4% | \$97.15 | 7.7% | \$127.35 | 9.4% | (\$42.08) | -2.7% |
| 6* | 8 | 463 | \$2,502.83 | (\$424.38) | -17.0% | \$147.83 | 7.1% | \$199.41 | 9.0% | (\$77.14) | -3.1% |
| 8* | 1 | 620 | \$3,919.61 | (\$674.49) | -17.2% | \$243.38 | 7.5% | \$319.52 | 9.2% | (\$111.59) | -2.8% |

7 APPENDIX A - PROJECTED WATER SALES

7.1 Projected Water Sales - FY 2019

| FY 2019 Water Sa | ales | | | | | | | | | | |
|------------------|-----------|-----------|---------|---------|-----------|--------------|---------|---------|------------|-----------|--|
| Inside City | | | | | | Outside City | | | | | |
| Month | Block 1 | Block 2 | Block 3 | Block 4 | Total | Block 1 | Block 2 | Block 3 | Block 4 | Total | |
| July 2018 | 391,550 | 445,440 | 69,261 | 53,499 | 959,750 | 59,968 | 71,780 | 11,923 | 10,730 | 154,401 | |
| August 2018 | 396,136 | 467,797 | 73,660 | 59,578 | 997,171 | 60,280 | 77,004 | 12,527 | 11,059 | 160,870 | |
| September 2018 | 398,366 | 491,881 | 84,191 | 74,045 | 1,048,483 | 60,498 | 77,302 | 14,077 | 10,918 | 162,795 | |
| October 2018 | 392,192 | 446,012 | 67,515 | 53,781 | 959,500 | 59,943 | 73,493 | 12,330 | 10,114 | 155,880 | |
| November 2018 | 384,501 | 379,029 | 51,870 | 46,511 | 861,911 | 57,505 | 52,936 | 8,836 | 8,055 | 127,332 | |
| December 2018 | 364,802 | 287,059 | 34,685 | 34,277 | 720,823 | 55,901 | 44,104 | 6,916 | 6,930 | 113,851 | |
| January 2019 | 357,601 | 262,751 | 29,980 | 30,973 | 681,305 | 54,353 | 40,137 | 6,062 | 6,698 | 107,250 | |
| February 2019 | 357,625 | 257,869 | 28,240 | 29,585 | 673,319 | 54,445 | 38,059 | 5,834 | 6,172 | 104,510 | |
| March 2019 | 350,889 | 238,359 | 23,822 | 27,049 | 640,119 | 53,515 | 35,415 | 5,441 | 5,454 | 99,825 | |
| April 2019 | 358,189 | 279,095 | 30,558 | 27,867 | 695,709 | 53,330 | 36,627 | 5,395 | 5,377 | 100,729 | |
| May 2019 | 374,174 | 341,459 | 36,803 | 32,863 | 785,299 | 56,801 | 54,310 | 7,881 | 7,088 | 126,080 | |
| June 2019 | 387,893 | 422,027 | 56,817 | 49,735 | 916,472 | 59,313 | 67,267 | 11,426 | 8,610 | 146,616 | |
| Total | 4,513,918 | 4,318,778 | 587,402 | 519,763 | 9,939,861 | 685,852 | 668,434 | 108,648 | 97,205 | 1,560,139 | |

| Month | Block 1 | Block 2 | Block 3 | Block 4 | Total |
|----------------|-----------|-----------|---------|---------|------------|
| July 2018 | 451,518 | 517,220 | 81,184 | 64,229 | 1,114,151 |
| August 2018 | 456,416 | 544,801 | 86,187 | 70,637 | 1,158,041 |
| September 2018 | 458,864 | 569,183 | 98,268 | 84,963 | 1,211,278 |
| October 2018 | 452,135 | 519,505 | 79,845 | 63,895 | 1,115,380 |
| November 2018 | 442,006 | 431,965 | 60,706 | 54,566 | 989,243 |
| December 2018 | 420,703 | 331,163 | 41,601 | 41,207 | 834,674 |
| January 2019 | 411,954 | 302,888 | 36,042 | 37,671 | 788,555 |
| February 2019 | 412,070 | 295,928 | 34,074 | 35,757 | 777,829 |
| March 2019 | 404,404 | 273,774 | 29,263 | 32,503 | 739,944 |
| April 2019 | 411,519 | 315,722 | 35,953 | 33,244 | 796,438 |
| May 2019 | 430,975 | 395,769 | 44,684 | 39,951 | 911,379 |
| June 2019 | 447,206 | 489,294 | 68,243 | 58,345 | 1,063,088 |
| Total | 5,199,770 | 4,987,212 | 696,050 | 616,968 | 11,500,000 |

7.2 PROJECTED WATER SALES - FY 2020

| Inside City | | | | | | Outside City | | | | | |
|----------------|-----------|-----------|---------|---------|-----------|--------------|---------|---------|---------|-----------|--|
| Month | Block 1 | Block 2 | Block 3 | Block 4 | Total | Block 1 | Block 2 | Block 3 | Block 4 | Total | |
| July 2019 | 393,226 | 447,760 | 69,756 | 53,718 | 964,460 | 60,251 | 72,116 | 11,993 | 10,902 | 155,262 | |
| August 2019 | 397,790 | 470,215 | 74,132 | 59,932 | 1,002,069 | 60,559 | 77,356 | 12,612 | 11,236 | 161,763 | |
| September 2019 | 400,023 | 494,292 | 84,792 | 74,524 | 1,053,631 | 60,778 | 77,617 | 14,199 | 11,102 | 163,696 | |
| October 2019 | 393,884 | 448,395 | 67,940 | 53,991 | 964,210 | 60,227 | 73,824 | 12,412 | 10,286 | 156,749 | |
| November 2019 | 386,244 | 381,195 | 52,081 | 46,613 | 866,133 | 57,806 | 53,198 | 8,865 | 8,187 | 128,056 | |
| December 2019 | 366,628 | 288,861 | 34,692 | 34,159 | 724,340 | 56,212 | 44,329 | 6,930 | 7,038 | 114,509 | |
| January 2020 | 359,456 | 264,441 | 29,923 | 30,804 | 684,624 | 54,670 | 40,342 | 6,066 | 6,796 | 107,874 | |
| February 2020 | 359,489 | 259,565 | 28,152 | 29,392 | 676,598 | 54,764 | 38,257 | 5,833 | 6,267 | 105,121 | |
| March 2020 | 352,790 | 239,963 | 23,675 | 26,802 | 643,230 | 53,839 | 35,598 | 5,435 | 5,541 | 100,413 | |
| April 2020 | 360,064 | 280,870 | 30,507 | 27,657 | 699,098 | 53,652 | 36,817 | 5,389 | 5,463 | 101,321 | |
| May 2020 | 375,972 | 343,552 | 36,863 | 32,751 | 789,138 | 57,103 | 54,581 | 7,912 | 7,204 | 126,800 | |
| June 2020 | 389,621 | 424,361 | 57,120 | 49,866 | 920,968 | 59,607 | 67,537 | 11,547 | 8,746 | 147,437 | |
| Total | 4,535,187 | 4,343,470 | 589,633 | 520,209 | 9,988,499 | 689,468 | 671,572 | 109,193 | 98,768 | 1,569,001 | |

| Month | Block 1 | Block 2 | Block 3 | Block 4 | Total |
|----------------|-----------|-----------|---------|---------|------------|
| July 2019 | 453,477 | 519,876 | 81,749 | 64,620 | 1,119,722 |
| August 2019 | 458,349 | 547,571 | 86,744 | 71,168 | 1,163,832 |
| September 2019 | 460,801 | 571,909 | 98,991 | 85,626 | 1,217,327 |
| October 2019 | 454,111 | 522,219 | 80,352 | 64,277 | 1,120,959 |
| November 2019 | 444,050 | 434,393 | 60,946 | 54,800 | 994,189 |
| December 2019 | 422,840 | 333,190 | 41,622 | 41,197 | 838,849 |
| January 2020 | 414,126 | 304,783 | 35,989 | 37,600 | 792,498 |
| February 2020 | 414,253 | 297,822 | 33,985 | 35,659 | 781,719 |
| March 2020 | 406,629 | 275,561 | 29,110 | 32,343 | 743,643 |
| April 2020 | 413,716 | 317,687 | 35,896 | 33,120 | 800,419 |
| May 2020 | 433,075 | 398,133 | 44,775 | 39,955 | 915,938 |
| June 2020 | 449,228 | 491,898 | 68,667 | 58,612 | 1,068,405 |
| Total | 5,224,655 | 5,015,042 | 698,826 | 618,977 | 11,557,500 |

7.3 PROJECTED WATER SALES - FY 2021

| FY 2021 Water Sal | c3 | | | | | Outside Cit | | | | |
|-------------------|-----------|-----------|---------|---------|------------|-------------|---------|---------|---------|-----------|
| | 1 - 1 | m1 1 2 | | | | Outside Cit | - | | | |
| Month | Block 1 | Block 2 | Block 3 | Block 4 | Total | Block 1 | Block 2 | Block 3 | Block 4 | Total |
| July 2020 | 395,267 | 449,638 | 70,216 | 54,049 | 969,170 | 60,567 | 72,363 | 12,172 | 11,049 | 156,151 |
| August 2020 | 399,807 | 472,191 | 74,569 | 60,400 | 1,006,967 | 60,872 | 77,619 | 12,805 | 11,389 | 162,685 |
| September 2020 | 402,046 | 496,268 | 85,364 | 75,117 | 1,058,795 | 61,093 | 77,841 | 14,433 | 11,261 | 164,628 |
| October 2020 | 395,940 | 450,319 | 68,344 | 54,314 | 968,917 | 60,544 | 74,065 | 12,605 | 10,432 | 157,646 |
| November 2020 | 388,353 | 382,915 | 52,256 | 46,827 | 870,351 | 58,141 | 53,370 | 9,005 | 8,294 | 128,810 |
| December 2020 | 368,819 | 290,222 | 34,657 | 34,152 | 727,850 | 56,556 | 44,463 | 7,055 | 7,120 | 115,194 |
| January 2021 | 361,679 | 265,685 | 29,826 | 30,744 | 687,934 | 55,022 | 40,457 | 6,180 | 6,868 | 108,527 |
| February 2021 | 361,720 | 260,814 | 28,026 | 29,308 | 679,868 | 55,117 | 38,366 | 5,942 | 6,335 | 105,760 |
| March 2021 | 355,054 | 241,124 | 23,491 | 26,665 | 646,334 | 54,198 | 35,691 | 5,537 | 5,602 | 101,028 |
| April 2021 | 362,300 | 282,207 | 30,415 | 27,558 | 702,480 | 54,008 | 36,918 | 5,492 | 5,523 | 101,941 |
| May 2021 | 378,135 | 345,203 | 36,882 | 32,751 | 792,971 | 57,439 | 54,762 | 8,051 | 7,295 | 127,547 |
| June 2021 | 391,712 | 426,248 | 57,391 | 50,108 | 925,459 | 59,936 | 67,717 | 11,777 | 8,857 | 148,287 |
| Total | 4,560,832 | 4,362,834 | 591,437 | 521,993 | 10,037,096 | 693,493 | 673,632 | 111,054 | 100,025 | 1,578,204 |

| Month | Block 1 | Block 2 | Block 3 | Block 4 | Total |
|----------------|-----------|-----------|---------|---------|------------|
| July 2020 | 455,834 | 522,001 | 82,388 | 65,098 | 1,125,321 |
| August 2020 | 460,679 | 549,810 | 87,374 | 71,789 | 1,169,652 |
| September 2020 | 463,139 | 574,109 | 99,797 | 86,378 | 1,223,423 |
| October 2020 | 456,484 | 524,384 | 80,949 | 64,746 | 1,126,563 |
| November 2020 | 446,494 | 436,285 | 61,261 | 55,121 | 999,161 |
| December 2020 | 425,375 | 334,685 | 41,712 | 41,272 | 843,044 |
| January 2021 | 416,701 | 306,142 | 36,006 | 37,612 | 796,461 |
| February 2021 | 416,837 | 299,180 | 33,968 | 35,643 | 785,628 |
| March 2021 | 409,252 | 276,815 | 29,028 | 32,267 | 747,362 |
| April 2021 | 416,308 | 319,125 | 35,907 | 33,081 | 804,421 |
| May 2021 | 435,574 | 399,965 | 44,933 | 40,046 | 920,518 |
| June 2021 | 451,648 | 493,965 | 69,168 | 58,965 | 1,073,746 |
| Total | 5,254,325 | 5,036,466 | 702,491 | 622,018 | 11,615,300 |

8 APPENDIX B - PROPOSED RATES AND CALCULATIONS

8.1 RECOMMENDED RATES – DISTRIBUTION AND CUSTOMER SUPPORTING CALCULATIONS Calculation of Existing FY 2019 D&C Annual Revenue

| Meter Size | # of Meters | Existing Rate | Annual Revenue |
|--|---|--|---|
| 5/8" & 3/4" | 16,996 | \$17.13 | \$3,493,903 |
| 1" | 10,012 | \$32.55 | \$3,910,687 |
| 1 1/2" | 1,935 | \$65.73 | \$1,526,251 |
| 2" | 1,641 | \$154.21 | \$3,036,703 |
| 3" | 235 | \$376.95 | \$1,062,999 |
| 4" | 220 | \$582.55 | \$1,537,932 |
| 6" | 99 | \$890.95 | \$1,058,449 |
| 8" | 29 | \$1,456.35 | \$506,810 |
| 10" | 4 | \$1,895.40 | \$68,234 |
| | | | |
| Total Inside | 31,171 | | \$16,201,968 |
| tside Customers | | \$21.41 | |
| | 4,137 | \$21.41 \$40.68 | \$1,062,878 |
| tside Customers 5/8" & 3/4" 1" | | \$40.68 | \$1,062,878 \$902,608 |
| tside Customers 5/8" & 3/4" | 4,137 1,849 | | \$1,062,878 |
| tside Customers 5/8" & 3/4" 1" 1 1/2" | 4,137 1,849 263 | \$40.68 \$82.17 | \$1,062,878 \$902,608 \$259,329 |
| tside Customers 5/8" & 3/4" 1" 1 1/2" 2" | 4,137 1,849 263 100 | \$40.68 \$82.17 \$192.76 | \$1,062,878 \$902,608 \$259,329 \$231,312 |
| tside Customers 5/8" & 3/4" 1" 1 1/2" 2" 3" | 4,137 1,849 263 100 17 | \$40.68 \$82.17 \$192.76 \$471.19 | \$1,062,878 \$902,608 \$259,329 \$231,312 \$96,123 |
| tside Customers 5/8" & 3/4" 1" 1 1/2" 2" 3" 4" | 4,137 1,849 263 100 17 8 | \$40.68 \$82.17 \$192.76 \$471.19 \$728.18 | \$1,062,878 \$902,608 \$259,329 \$231,312 \$96,123 \$69,905 |
| tside Customers 5/8" & 3/4" 1" 1 1/2" 2" 3" 4" 6" | 4,137 1,849 263 100 17 8 | \$40.68 \$82.17 \$192.76 \$471.19 \$728.18 \$1,113.69 | \$1,062,878 \$902,608 \$259,329 \$231,312 \$96,123 \$69,905 \$106,914 |

Calculation of Proposed June 1, 2019 Monthly D&C Rates

| All Customers | | | | *************************************** | | |
|---------------|-----------------------|----------|----------------------|---|----------------------|-------------------------------|
| Meter Size | Hydraulic Capacity | # Meters | Equivalent Meters | D&C Costs Allocated | Proposed D&C Rate | Expected Annual Revenue |
| 5/8" & 3/4" | 1.0 | 21,133 | 21,133 | \$4,463,540 | \$17.60 | \$4,463,291 |
| 1" | 1.9 | 11,861 | 22,536 | \$4,759,869 | \$33.44 | \$4,759,581 |
| 1 1/2" | 3.9 | 2,198 | 8,572 | \$1,810,508 | \$68.64 | \$1,810,449 |
| 2" | 9.0 | 1,741 | 15,669 | \$3,309,478 | \$158.42 | \$3,309,711 |
| 3" | 22.0 | 252 | 5,544 | \$1,170,958 | \$387.26 | \$1,171,074 |
| 4" | 33.8 | 228 | 7,706 | \$1,627,598 | \$594.93 | \$1,627,728 |
| 6" | 52.2 | 107 | 5,585 | \$1,179,618 | \$918.77 | \$1,179,701 |
| 8" | 84.9 | 30 | 2,547 | \$537,957 | \$1,494.41 | \$537,988 |
| 10" | 110.5 | 4 | 442 | \$93,356 | \$1,944.97 | \$93,359 |
| Total | | 37,554 | 89,734 | \$18,952,882 | | \$18,952,882 |

Calculation of Proposed August 1, 2019 Monthly D&C Rates

| All Customers | | | | | | |
|----------------|-----------------------|----------|----------------------|------------------------|----------------------|-------------------------------|
| Meter Size | Hydraulic Capacity | # Meters | Equivalent Meters | D&C Costs Allocated | Proposed D&C Rate | Expected Annual Revenue |
| 5/8" & 3/4" | 1.0 | 21,133 | 21,133 | \$5,272,241 | \$20.79 | \$5,272,261 |
| 1" | 1.9 | 11,861 | 22,536 | \$5,622,260 | \$39.50 | \$5,622,114 |
| 1 1/2" | 3.9 | 2,198 | 8,572 | \$2,138,535 | \$81.08 | \$2,138,566 |
| 2" | 9.0 | 1,741 | 15,669 | \$3,909,087 | \$187.11 | \$3,909,102 |
| 3" | 22.0 | 252 | 5,544 | \$1,383,112 | \$457.39 | \$1,383,147 |
| 4" | 33.8 | 228 | 7,706 | \$1,922,486 | \$702.67 | \$1,922,505 |
| 6 ⁿ | 52.2 | 107 | 5,585 | \$1,393,341 | \$1,085.17 | \$1,393,358 |
| 8" | 84.9 | 30 | 2,547 | \$635,423 | \$1,765.08 | \$635,429 |
| 10" | 110.5 | 4 | 442 | \$110,270 | \$2,297.34 | \$110,272 |
| Total | V | 37,554 | 89,734 | \$22,386,755 | | \$22,386,75 |

Calculation of Proposed July 1, 2020 Monthly D&C Rates

| All Customers | | | | | | |
|---------------|-----------------------|----------|----------------------|------------------------|----------------------|-------------------------------|
| Meter Size | Hydraulic Capacity | # Meters | Equivalent Meters | D&C Costs Allocated | Proposed D&C Rate | Expected Annual Revenue |
| 5/8" & 3/4" | 1.0 | 21,133 | 21,133 | \$6,157,384 | \$24.28 | \$6,157,311 |
| 1" | 1.9 | 11,861 | 22,536 | \$6,566,165 | \$46.13 | \$6,565,775 |
| 1 1/2" | 3.9 | 2,198 | 8,572 | \$2,497,568 | \$94.69 | \$2,497,543 |
| 2" | 9.0 | 1,741 | 15,669 | \$4,565,374 | \$218.54 | \$4,565,738 |
| 3" | 22.0 | 252 | 5,544 | \$1,615,319 | \$534.18 | \$1,615,360 |
| 4" | 33.8 | 228 | 7,706 | \$2,245,247 | \$820.64 | \$2,245,271 |
| 6" | 52.2 | 107 | 5,585 | \$1,627,265 | \$1,267.37 | \$1,627,303 |
| 8" | 84.9 | 30 | 2,547 | \$742,103 | \$2,061.45 | \$742,122 |
| 10" | 110.5 | 4 | 442 | \$128,783 | \$2,683.01 | \$128,784 |
| Total | | 37,554 | 89,734 | \$26,145,208 | | \$26,145,208 |

8.2 RECOMMENDED RATES - COMMODITY

Calculation of Proposed June 1, 2019 Commodity Rates

| Water Rate per BU | Block 1 | Block 2 | Block 3 | Block 4 | Total |
|----------------------|-------------|--------------|-------------|-------------|---|
| Summer Rate | \$1.42537 | \$3.07344 | \$3.60377 | \$4.38395 | |
| Winter Rate | \$1.39801 | \$2.99570 | \$3.51934 | \$4.27991 | 100000000000000000000000000000000000000 |
| Average Rate | \$1.41199 | \$3.03984 | \$3.56962 | \$4.33916 | |
| Winter | \$3,555,531 | \$6,456,400 | \$990,795 | \$1,136,741 | |
| Winter | \$3,555,531 | \$6,456,400 | \$990,795 | \$1,136,741 | \$12,139,467 |
| Total Revenues | \$7,342,032 | \$15,160,342 | \$2,484,626 | \$2,677,120 | \$27,664,120 |
| Water Sales | | V | | | |
| Summer | 2,656,500 | 2,831,988 | 414,519 | 351,367 | 6,254,374 |
| | | 0.466.000 | 004 500 | 005 000 | E 045 000 |
| Winter | 2,543,276 | 2,155,222 | 281,528 | 265,600 | 5,245,626 |

Calculation of Proposed August 1, 2019 Commodity Rates

| FY 2020 Rate Plan R | evenue \$27,802, | 491 | | | |
|---------------------|------------------|--------------|-------------|-------------|--------------|
| | Block 1 | Block 2 | Block 3 | Block 4 | Total |
| Water Rate per BU | \$1.41199 | \$3.03984 | \$3.56962 | \$4.33916 | |
| Total Revenues | \$7,377,160 | \$15,244,961 | \$2,494,541 | \$2,685,829 | \$27,802,491 |
| Total Sales | 5,224,655 | 5,015,046 | 698,825 | 618,974 | 11,557,500 |

Calculation of Proposed August 1, 2020 Commodity Rates

| FY 2021 Rate Plan Re | evenue \$28,360,06 | 55 | | | |
|----------------------|--------------------|--------------|-------------|-------------|--------------|
| | Block 1 | Block 2 | Block 3 | Block 4 | Total |
| Water Rate per BU | \$1.44852 | \$3.07637 | \$3.60615 | \$4.37569 | |
| Total Revenues | \$7,610,982 | \$15,494,036 | \$2,533,287 | \$2,721,760 | \$28,360,065 |
| Total Sales | 5,254,325 | 5,036,467 | 702,490 | 622,018 | 11,615,300 |

8.3 RECOMMENDED RATES - CAPITAL IMPROVEMENT CHARGE

| FY 2019 CIC Rate | Revenue | Sales | CIC Rate \$/BU |
|---|--|--|------------------------|
| Existing Rate | | | |
| Area A - Summer | \$4,815,988 | 4,889,030 | \$0.98506 |
| Area B – Summer | \$1,020,113 | 767,100 | \$1.32983 |
| Area A – Winter | \$3,815,658 | 4,105,949 | \$0.92930 |
| Area B - Winter | \$800,310 | 637,921 | \$1.25456 |
| Total | \$10,452,069 | 10,400,000 | \$1.00501 |
| June 1, 2019 - Elimin | ate Inside / Outside Di | ifferentials | |
| | | The state of the s | 64 00400 |
| June 1, 2019 – Elimin Summer Winter | \$5,836,100 | 5,656,130 | \$1.03182 \$0.97304 |
| Summer | | The state of the s | |
| Summer Winter Total August 1, 2019 – Non | \$5,836,100 \$4,615,969 \$10,452,069 -seasonal Rate | 5,656,130 4,743,870 | \$0.97304 |
| Summer Winter Total August 1, 2019 – Non | \$5,836,100 \$4,615,969 \$10,452,069 | 5,656,130 4,743,870 10,400,000 | \$0.97304 |
| Summer Winter | \$5,836,100 \$4,615,969 \$10,452,069 -seasonal Rate | 5,656,130 4,743,870 | \$0.97304 |