

SUMMARY MEMORANDUM

To: Jennifer Duray, CPA
From: Miranda Kleven, PE
Re: **Heights Water District FY23 Rate Update**
Date: May 4, 2022

INTRODUCTION

In 2021, AE2S Nexus completed rate analyses upon which the City established rates for its customers for the 2022 and 2023 Fiscal Years. Since the completion of FY23 projections, the City's Capital Improvement Plan (CIP) has been modified such that the timelines for several significant projects previously incorporated in the FY23 revenue requirements have changed. To account for these changes, the City's water rate for the Resale Customer Heights Water District (HWD) was recalculated. This revision is out of the ordinary but is appropriate due to the significant impact the changes to the CIP have on capital-related rate revenue requirements. The updated FY23 rate for the Resale class is **\$2.97 per one thousand gallons (kgal)**. This is a decrease from the previously-calculated value of \$3.68 per kgal. It should be noted that although the revised rate is decreased from that previously calculated, it is an increase of 5.7% over the FY22 rate of \$2.81 per kgal due to increased operation and maintenance (O&M)-related revenue requirements.

FY23 RATE ANALYSIS MODIFICATIONS

To calculate the revised FY23 rate, the following updates were completed in the rate model maintained by the City:

- The FY23 revenue requirements were updated to reflect the actual FY23 budget, as opposed to the estimated budget previously used for the FY23 calculation.
- Three-year average actual expenditure to budgeted expenditure ratio was updated to reflect FY21 results. The updated value, upon which allocation of Joint O&M expenses is based, is 95.1% (previously 91.4%).
- Water use and account values by user class were updated to reflect FY21 billing statistics.

Summary Memorandum

Re: **Heights Water District FY23 Rate Update**

May 4, 2022

- Debt service, capital expenditure, and grant funding values were updated to reflect the most current information based on the City’s Capital Improvement Plan (CIP).
- The weighted average cost of capital value for FY23 was updated to account for the 30-year treasury rate as of June 30, 2021 of 2.06%. This resulted in a calculated weighted cost of capital for FY23 of 4.8%, as opposed to the previously calculated value of 3.92%.

Updates to the FY23 CIP are shown in Table 1, along with an indication of whether each project provides a benefit to HWD. Projects without a benefit to HWD are not used in the overall rate calculations. Table 2 shows the extended CIP for FY24-FY28, identifying those projects that will benefit the HWD. The HWD can expect as future projects from which HWD received a benefit come online, particularly those in bold in Table 2, rates will increase in accordance with the associated capital-related revenue requirements.

Table 3 summarizes the updated FY23 Resale rate calculation, as compared to the calculated FY22 rate and the previously calculated FY23 rate. It is recommended that the City adopt a revised Resale rate for FY23 of **\$2.97 per kgal** to meet the conditions of the agreement for service to HWD.

Table 1: Revised FY23 Water Capital Improvements Plan (CIP)

Project	Previous CIP FY23	Updated CIP FY23	Benefit to HWD?
Watermain Replacements	\$3,800,000	\$4,800,000	No
Equipment Replacements	\$200,000	\$1,009,962	Yes
Water Compensation Agreements	\$300,000	\$650,000	Yes
WTP Electrical Improvements	\$400,000	\$500,000	Yes
Water Lead Service Replacement	\$500,000	\$750,000	No
West End Reservoir	\$34,000,000	--	Yes
Storage Improvements (Zone 1)	\$600,000	--	Yes
HS Pump Station Improvements	\$150,000	--	Yes
Zone 6 Reservoir and Line	\$100,000	--	No
Staples Reservoir	--	\$6,000,000	No
South Frontage Road Loop	--	\$371,245	No
Total	\$40,050,000	\$14,081,207	

Summary Memorandum
 Re: Heights Water District FY23 Rate Update
 May 4, 2022

Table 2: Updated FY24-FY28 Water Capital Improvements Plan (CIP)

Project	FY24	FY25	FY26	FY27	FY28	Benefit to HWD?
Watermain Replacements	\$5,300,000	\$5,800,000	\$6,400,000	\$6,940,000	\$7,600,000	No
Equipment Replacements	\$300,000	\$430,000	\$350,000	\$900,000	\$510,000	Yes
Water Compensation Agreements	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	Yes
WTP Electrical Improvements	\$200,000	\$75,000	\$100,000	\$250,000	\$300,000	Yes
Water Lead Service Replacement	\$750,000	--	--	--	--	No
West End Intake/PS	\$19,000,000	--	--	--	--	Yes
West End WTP	\$70,000,000	--	--	--	--	Yes
West End Reservoir	--	\$32,000,000	--	--	--	Yes
Storage Improvements (Zone 1)	--	\$6,450,000	--	--	--	Yes
West End Distribution	\$4,000,000	--	--	--	--	No
Airport Area Watermain and PS	--	--	--	--	\$4,000,000	Yes
Fox Reservoir Replacement	--	--	--	--	\$4,000,000	Yes
Zone 4 PS Improvements	\$6,200,000	--	--	--	--	No
Willett Res/PS Improvements	\$1,890,000	--	--	--	--	Yes
Recoat Logan Reservoir	\$500,000	--	--	--	--	No
Zone 4W Additional Storage	--	--	\$6,900,000	--	--	No
Zone 6 Res/Line	--	\$110,000	\$890,000	\$8,150,000	--	No
Heated Shop/Breakroom	--	\$720,000	--	--	--	Yes
WTP Facility Plan	--	--	\$300,000	--	--	Yes
Total	\$108,440,000	\$45,885,000	\$15,240,000	\$16,540,000	\$16,710,000	

Summary Memorandum
 Re: Heights Water District FY23 Rate Update
 May 4, 2022

Table 3: Summary of Resale Water Rate Calculations – FY23 Revised

Resale Water Rate Summary	FY2022	FY2023	FY2023 REVISED
Projected Water Purchase (kgal)	938,998	955,900	993,680
Actual Water Sales (kgal)			
Peaking Factor - Peak Day	2.60	2.60	2.60
Peaking Factor - Peak Hour	3.83	3.83	3.83
Allocated O&M Revenue Requirements - Resale	FY2022	FY2023	FY2023 REVISED
Base	\$ 640,800	\$ 666,676	\$ 720,253
Max Day	\$ 596,674	\$ 621,157	\$ 616,919
Max Hr.	\$ 31,423	\$ 32,820	\$ 34,510
Customer	\$ 27	\$ 27	\$ 35
Meter	\$ 1,422	\$ 1,458	\$ 1,890
Direct Fire	\$ -	\$ -	\$ -
Total Resale O&M Revenue Requirements	\$ 1,270,345	\$ 1,322,137	\$ 1,373,606
Debt/Equity	FY2022	FY2023	FY2023 REVISED
Total Outstanding Debt	\$ 25,887,726	\$ 95,118,503	\$ 23,118,503
Interest on Outstanding Debt	\$ 673,459	\$ 2,760,258	\$ 600,258
Effective Interest Rate on Outstanding Debt	2.60%	2.90%	2.60%
Total Fund Equity	\$ 193,911,655	\$ 197,390,579	\$ 195,694,517
Rate of Return on Equity	4.41%	4.41%	5.06%
Total Equity and Debt	\$ 219,799,381	\$ 292,509,082	\$ 218,813,020
Weighted Cost of Capital	4.20%	3.92%	4.80%
Summary of Capital Revenue Requirements - Non-Owners	FY2022	FY2023	FY2023 REVISED
Net Plant in Service for Non-Owners	\$ 28,538,024	\$ 52,473,602	\$ 31,314,642
Share of Working Capital for Non-Owners	\$ 266,785	\$ 275,817	\$ 282,334
Total Rate Base for Non-Owners	\$ 28,804,808	\$ 52,749,420	\$ 31,596,976
Return on Rate Base for Non-Owners	\$ 1,208,936	\$ 2,067,566	\$ 1,516,565
Depreciation Less Amortization for Non-Owners	\$ 1,232,470	\$ 1,652,041	\$ 1,275,372
Total Capital-Based Revenue Requirements for Non-Owners	\$ 2,441,406	\$ 3,719,606	\$ 2,791,937
Allocated Capital Revenue Requirements - Resale	FY2022	FY2023	FY2023 REVISED
Base	\$ 566,351	\$ 1,044,445	\$ 658,595
Max Day	\$ 693,081	\$ 1,067,981	\$ 807,892
Max Hr.	\$ 95,235	\$ 83,868	\$ 104,061
Customer	\$ -	\$ -	\$ -
Meter	\$ 4	\$ 3	\$ 3
Direct Fire	\$ -	\$ -	\$ -
Total Resale Capital Revenue Requirements	\$ 1,354,671	\$ 2,196,296	\$ 1,570,551
Total Resale Revenue Requirements	\$ 2,625,016	\$ 3,518,433	\$ 2,944,157
Calculated Rate - Resale (\$/kgal)	\$ 2.81	\$ 3.68	\$ 2.97