

**To:** City of Fernley

**From:** Catherine Hansford

**Date:** July 27, 2021

**Subject:** Changes to the Draft Water and Wastewater Utilities Rate Study

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## Background

The City of Fernley (City) contracted Hansford Economic Consulting LLC (HEC) to prepare a Water and Wastewater Utilities Rate Study (Study). The Draft Study was completed and presented to City Council April 21, 2021. Following the input from Fernley City Council members, and subsequent notification of grant monies that the City will be receiving under the American Rescue Plan Act of 2021 (ARPA), the City directed HEC to perform the following updates to the Draft Study.

1. Change the implementation date of new rates from July 1, 2021 to January 1, 2022.
2. Apply \$8 million of ARPA grant funding to the wastewater fund.

In addition, both the water and wastewater connection fees were updated to reflect reduced outstanding debt from the change in implementation date, and refinement of identified bond-funded projects. This memorandum presents the results of the model changes.

## Wastewater Fees Changes

A summary of costs and financing sources for the wastewater capital improvements projects (CIP) list including the ARPA funding is provided in **Table 1** on the next page. The addition of ARPA grant funding reduces the amount of CIP cost funded by bond proceeds and cash.

**Table 2** shows the wastewater capital improvement projects (CIPs) that the ARPA grant funding has been applied to for purposes of the rate model. The City may change which projects are funded with ARPA grant monies depending on timing of projects and how “shovel-ready” they are. For the rate study, projects that benefit current ratepayers have been selected for ARPA funding. The application of \$8 million to the wastewater fund allows the rates to increase 3% per year rather than 6% per year (as was projected in the Draft Study). **Table 3** shows the updated rate table with a 3% increase each year.

**Figure 1** shows the difference in single family monthly rates with and without ARPA funding of \$8 million applied to the wastewater fund.

**Table 1**  
**Summary of Costs and Funding Sources – Wastewater CIP**

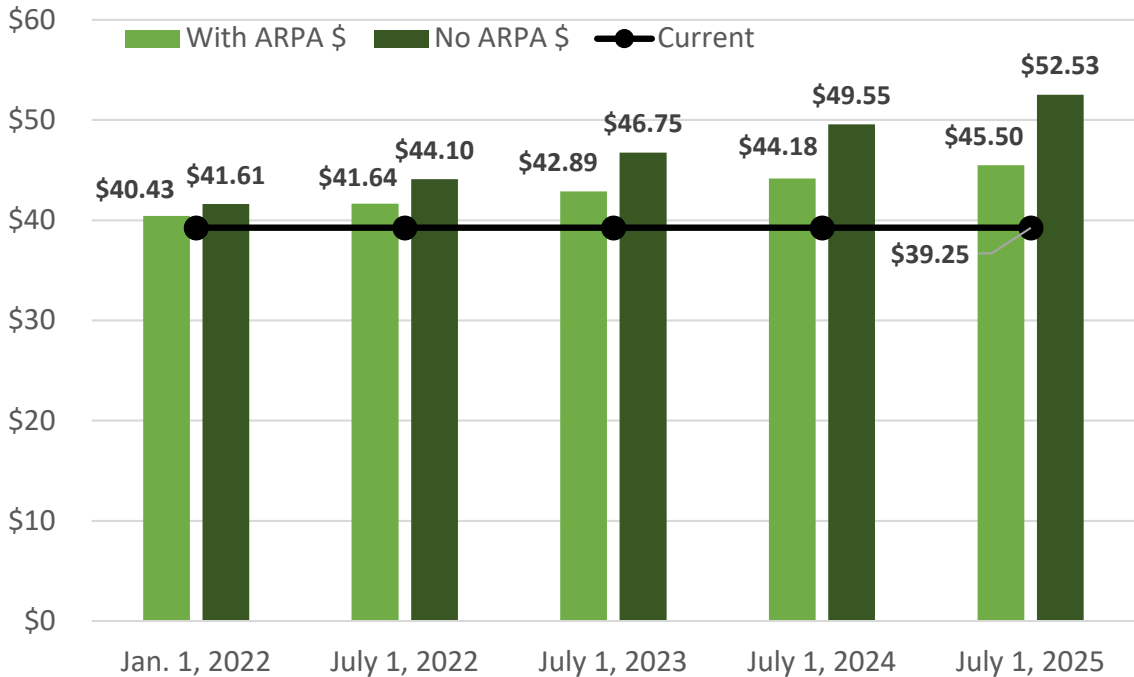
Source of Funds	5-Year Est. Total	Fiscal Year Ending				
		2022	2023	2024	2025	2026
<b>Use of Funds</b>		<i>Inflated project costs</i>				
Collection	\$16,456,368	\$2,250,000	\$5,330,250	\$4,634,441	\$1,430,246	\$2,811,431
Treatment Plant	\$11,909,897	\$910,000	\$2,587,500	\$2,771,795	\$2,771,795	\$2,868,808
Fleet and Other	\$165,000	\$165,000	\$0	\$0	\$0	\$0
<b>Total Estimated CIP Costs</b>	<b>\$28,531,265</b>	<b>\$3,325,000</b>	<b>\$7,917,750</b>	<b>\$7,406,235</b>	<b>\$4,202,041</b>	<b>\$5,680,239</b>
ARPA Grant Funding	\$8,000,000	\$1,360,000	\$2,945,198	\$1,663,077	\$310,441	\$1,721,285
Capital Reserve (Rates Cash)	\$4,847,712	\$1,565,000	\$843,138	\$1,227,043	\$622,792	\$589,739
Capacity Reserve (Connection Fee Cash)	\$2,000,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
Bond Proceeds [1]	\$13,683,552	\$0	\$3,729,414	\$4,116,115	\$2,868,808	\$2,969,216
<b>Total Funding</b>	<b>\$28,531,265</b>	<b>\$3,325,000</b>	<b>\$7,917,750</b>	<b>\$7,406,235</b>	<b>\$4,202,041</b>	<b>\$5,680,239</b>

Source: City of Fernley CIP and HEC 2021 rate study.

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[1] Bond Proceeds (75% of costs for projects >\$1 million estimated cost not funded by ARPA\$).

**Figure 1**  
**Difference in Wastewater Rates with and without ARPA Funding**



**Table 2**  
**Funding Source by Capital Improvement Project - Wastewater**

Improvement Type	Funding Source	5-Year Est. Total	Fiscal Year Ending				
			2022	2023	2024	2025	2026
<b>Collection System</b>							
Cottonwood LN Sanitary Sewer Rehab/Reconstruct	ARPA	\$140,000	\$140,000				
Villa Park Sewer Main Replacement - Villa Way and Parkland Design & Const.	ARPA	\$500,000	\$500,000				
South Arm Interceptor Phase 1 MH 295 to MH 1047 Design	Cash	\$350,000	\$350,000				
West Lift Station Upgrade, Bypass and Valve Replacement Design & Const.	Cash	\$1,000,000	\$1,000,000				
Shadow LN Rehab/Reconstruct Construction	ARPA	\$60,000	\$60,000				
US 50 Sewer Improvements & Sage Force Main Valve Installation Design & Const.	Cash	\$200,000	\$200,000				
Zone 15 Transite Sewer Main Replacement/Rehabilitation	ARPA	\$1,998,464	\$0				
Farm District Lift Relocation Construction	Bonds/Cash	\$3,714,211	\$0	\$517,500	\$1,053,282	\$277,179	\$1,721,285
Donner Trails Emigrant and Jessica Lane Interceptor Upgrade Construction	Bonds/Cash	\$1,921,827	\$0	\$258,750	\$1,663,077	\$1,053,282	\$1,090,147
Zone 14 Transite Sewer Main Replacement/Rehabilitation	ARPA	\$1,921,827	\$0	\$258,750	\$1,663,077	\$0	\$0
Truckee LN Rehab/Reconstruct Engineering Design	Cash	\$99,785	\$0	\$0	\$33,262	\$66,523	\$0
Lift Station Bypass for Loves and Rolling Meadows Design and Construction	Cash	\$221,744	\$0	\$0	\$221,744	\$0	\$0
Lyon DR, Industrial DR, Salvadore DR Rehab/Reconstruct Engineering Design	ARPA	\$33,262	\$0	\$0	\$0	\$33,262	\$0
South Arm Interceptor Phase 1 MH 295 to MH 1047 Construction	Bonds/Cash	\$3,622,500	\$0	\$3,622,500	\$0	\$0	\$0
6th ST, 7th ST & G ST Rehab/Reconstruct Engineering Design and Construction	ARPA	\$569,250	\$0	\$569,250	\$0	\$0	\$0
Fremont ST Rehab/Reconstruct Engineering Design	ARPA	\$103,500	\$0	\$103,500	\$0	\$0	\$0
<b>Subtotal Collection</b>		<b>\$16,456,368</b>	<b>\$2,250,000</b>	<b>\$5,330,250</b>	<b>\$4,634,441</b>	<b>\$1,430,246</b>	<b>\$2,811,431</b>
<b>Treatment</b>							
Camille Genset and SCADA Installation Design and Construction	ARPA	\$350,000	\$350,000	\$0	\$0	\$0	\$0
Metal Storage Building/Shop for East Plant Design	Cash	\$250,000	\$250,000	\$0	\$0	\$0	\$0
Grit Chamber Replacement	ARPA	\$310,000	\$310,000	\$0	\$0	\$0	\$0
Wastewater Plant Upgrade	Bonds/Cash	\$8,986,199	\$0	\$573,802	\$2,771,795	\$2,771,795	\$2,868,808
Wastewater Plant Upgrade	ARPA	\$2,013,698	\$0	\$2,013,698	\$0	\$0	\$0
<b>Subtotal Treatment</b>		<b>\$11,909,897</b>	<b>\$910,000</b>	<b>\$2,587,500</b>	<b>\$2,771,795</b>	<b>\$2,771,795</b>	<b>\$2,868,808</b>
<b>Fleet and Other</b>							
Crane Truck	Cash	\$90,000	\$90,000	\$0	\$0	\$0	\$0
Sewer Master Plan Update (GL 520-810-320)	Cash	\$75,000	\$75,000	\$0	\$0	\$0	\$0
<b>Subtotal Fleet and Other</b>		<b>\$165,000</b>	<b>\$165,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Estimated CIP Costs</b>		<b>\$28,531,265</b>	<b>\$3,325,000</b>	<b>\$7,917,750</b>	<b>\$7,406,235</b>	<b>\$4,202,041</b>	<b>\$5,680,239</b>
<b>Estimated Funding Sources</b>							
ARPA Grant Funding	ARPA	\$8,000,000	\$1,360,000	\$2,945,198	\$1,663,077	\$310,441	\$1,721,285
Capital Reserve (Rates Cash)	Cash	\$4,847,712	\$1,565,000	\$843,138	\$1,227,043	\$622,792	\$589,739
Capacity Reserve (Connection Fee Cash)	Cash	\$2,000,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
Bond Proceeds (75% of costs for projects >\$1 Million estimated cost) [1]	Bonds/Cash	\$13,683,552	\$0	\$3,729,414	\$4,116,115	\$2,868,808	\$2,969,216
<b>Total Estimated Funding Sources</b>		<b>\$28,531,265</b>	<b>\$3,325,000</b>	<b>\$7,917,750</b>	<b>\$7,406,235</b>	<b>\$4,202,041</b>	<b>\$5,680,239</b>

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Source: City of Fernley public works February 2021 and HEC June 2021.

[1] These projects benefit both existing and future customers. The allocated share of future customers' cost, and associated debt service, is collected with connection fees.

**Table 3**  
**Wastewater Rate Table with ARPA Funding**

Customer Type	Current	Fiscal Year Ending				
		2022	2023	2024	2025	2026
	<i>New Rates Effective</i>	<i>Jan. 1, 2022</i>	<i>July 1, 2022</i>	<i>July 1, 2023</i>	<i>July 1, 2024</i>	<i>July 1, 2025</i>
	Percentage Increase	3.0%	3.0%	3.0%	3.0%	3.0%
<b>Residential</b>						
Flat Monthly Charge per Unit	\$39.25	\$40.43	\$41.64	\$42.89	\$44.18	\$45.50
<b>Non-Residential</b>						
Use Charge per 1,000 Gallons	\$2.73	\$2.81	\$2.89	\$2.98	\$3.07	\$3.16
<b>Flat Monthly Charge by Meter Size</b>						
3/4"	\$66.04	\$68.02	\$70.06	\$72.16	\$74.33	\$76.56
1"	\$81.38	\$83.82	\$86.34	\$88.93	\$91.59	\$94.34
1.5"	\$130.90	\$134.83	\$138.87	\$143.04	\$147.33	\$151.75
2"	\$244.03	\$251.35	\$258.89	\$266.66	\$274.66	\$282.90
3"	\$630.78	\$649.70	\$669.19	\$689.27	\$709.95	\$731.25
4"	\$1,017.50	\$1,048.03	\$1,079.47	\$1,111.85	\$1,145.21	\$1,179.56
6"	\$1,627.02	\$1,675.83	\$1,726.11	\$1,777.89	\$1,831.23	\$1,886.16

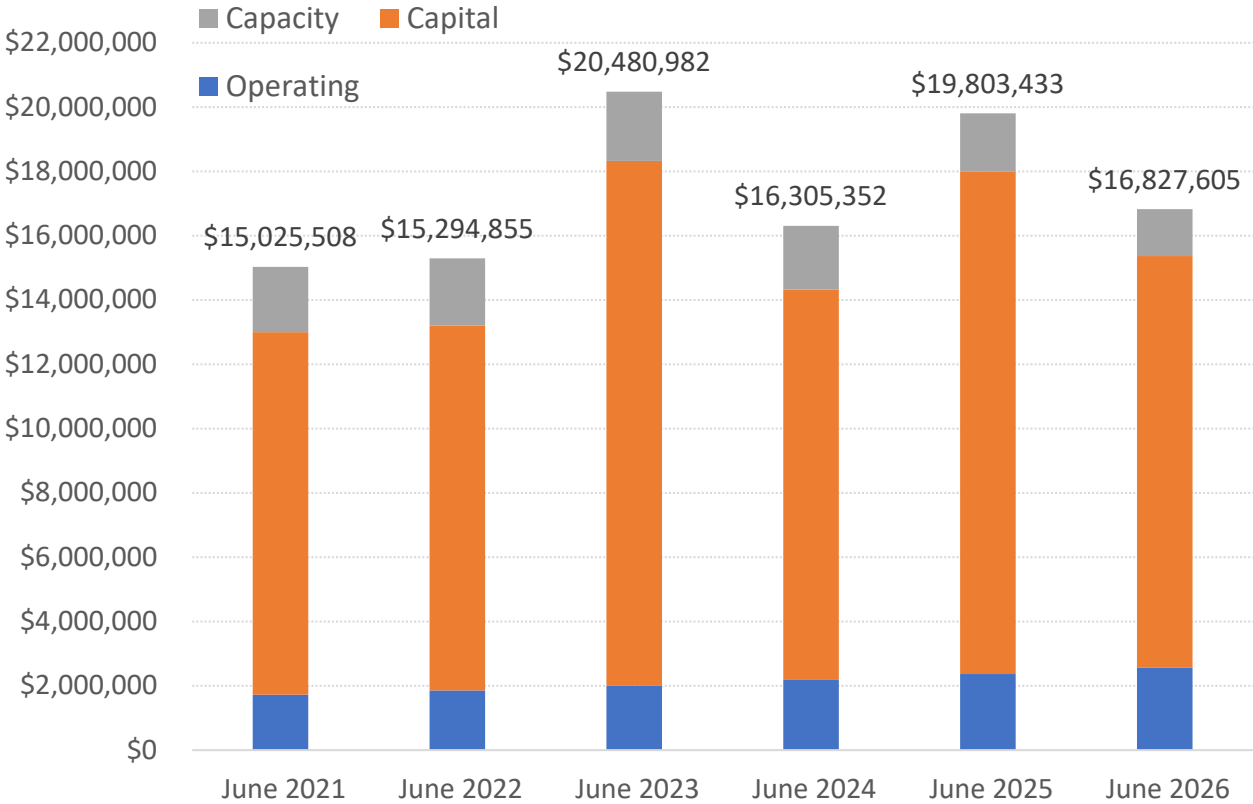
Source: City of Fernley and HEC.

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The change in implementation date from July 1, 2021 to January 1, 2022 reduces the amount of expected revenue in fiscal year 2022 for both the water and wastewater funds because the new rates will only be in effect for half of the year.

**Figure 2** on the next page shows the updated projection in wastewater cash fund balances. Note that the operating cash reserve policy is achieved, and about 95% of the target cash for capital reserves is projected to be achieved. It is not anticipated that any revenues will be available for the emergency fund, unless actual new development growth is greater than that projected in the rate study.

**Figure 2**  
**Projected Cash Flow - Wastewater**

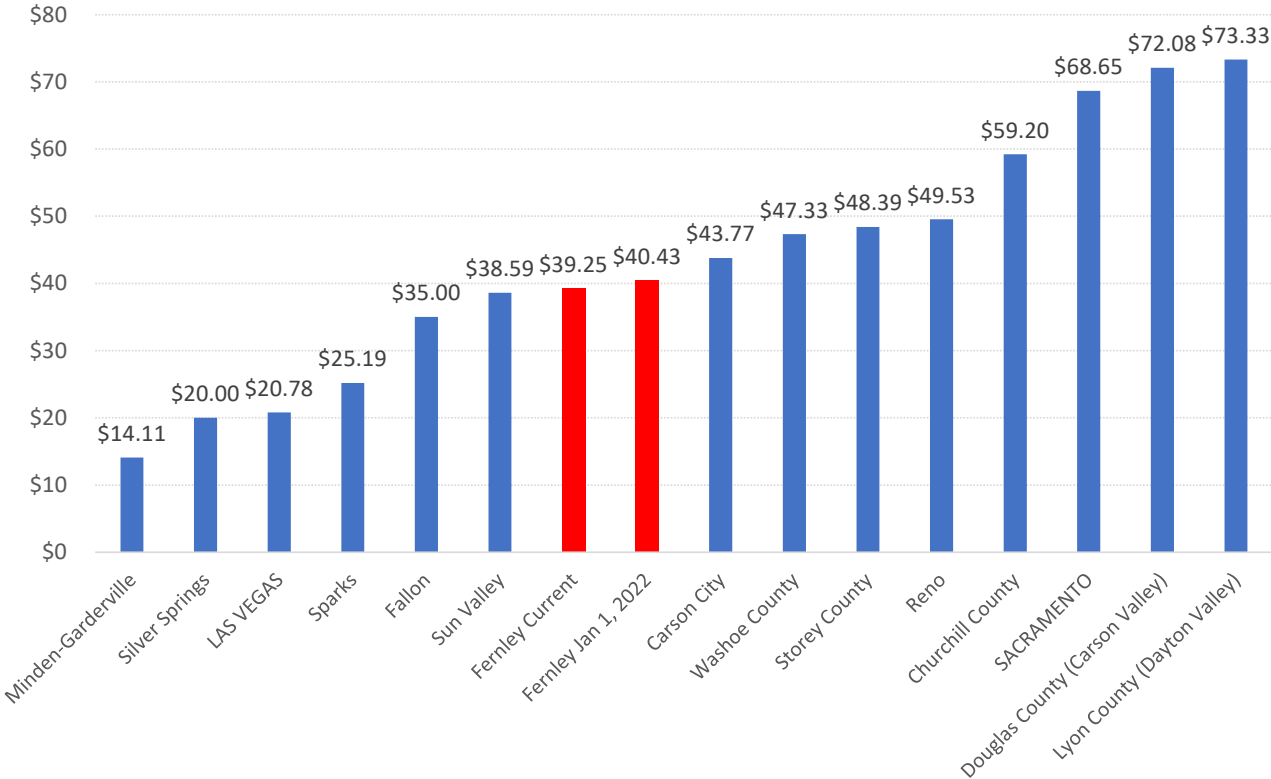


**Figure 3** on the next page compares the City’s monthly sewer rates with other communities in Nevada, including Las Vegas, as well as Sacramento. Las Vegas and Sacramento were included because of the recent influx of population from these areas.

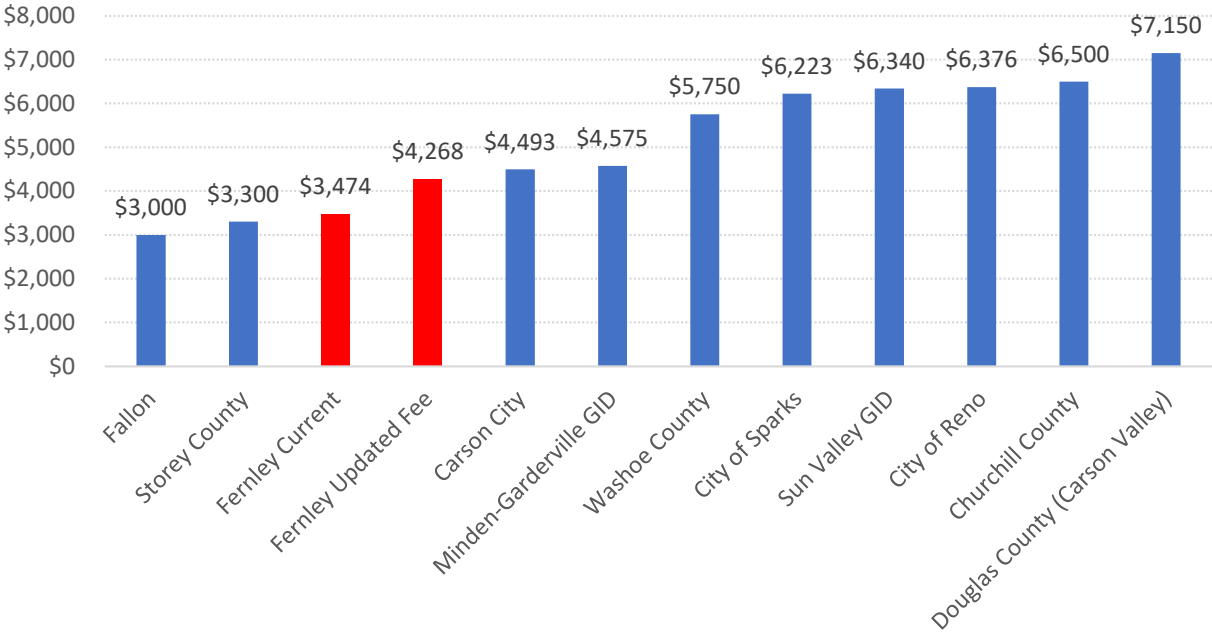
**Wastewater Connection Fee**

**Table 4** on page 7 shows the updated wastewater connection fee calculation. The updated fee is greater than calculated in the Draft Study. Currently, the wastewater connection fee is \$3,474 per EDU. The Draft Study calculated an increase in the fee to \$4,094 per EDU; this update calculates the fee at \$4,268 per EDU. **Figure 4** provides a comparison of the current and calculated updated Fernley wastewater connection fee with wastewater connection fees in the region.

**Figure 3**  
**Wastewater Residential Monthly Bill Comparison**



**Figure 4**  
**Comparison Connection Fees for Wastewater for a Single Family Unit**



**Table 4**  
**Wastewater Connection Fee Calculation**

Item		Draft Study Calculation	Updated Fee Calculation
<b>Buy-In Fee</b>		<i>Apr-21</i>	<i>Jul-21</i>
Net Book Value		\$27,022,240	\$27,022,240
less Outstanding Principal		\$6,265,948	\$5,965,243
<b>Buy-In Cost of Existing Facilities</b>		<b>\$20,756,292</b>	<b>\$21,056,997</b>
Projected EDUs in 2040	Table B-10	12,625	12,625
<b>Buy-in Fee per EDU</b>	<b>a</b>	<b>\$1,644</b>	<b>\$1,668</b>
<b>New Facilities Fee</b>			
New Facilities (Growth Share)	Table B-11	\$9,445,937	\$9,445,937
Financing Charges for New Facilities [1]	Table 23	\$4,320,000	\$5,181,052
<b>Total Costs</b>		<b>\$13,765,937</b>	<b>\$14,626,989</b>
Future new EDUs [2]	Table B-10	5,626	5,626
<b>New Facilities Fee per EDU</b>	<b>b</b>	<b>\$2,450</b>	<b>\$2,600</b>
<b>Total Connection Fee per Residential Unit or per 1,000 Galls/Day (Commercial) [3]</b>	<b>c = a +b</b>	<b>\$4,094</b>	<b>\$4,268</b>
Current Fee		\$3,474	\$3,474
Percentage Increase in Connection Fee		18%	23%

Source: HEC.

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[1] New growth's share of facilities financing charges.

[2] Anticipated through build-out of tentative maps.

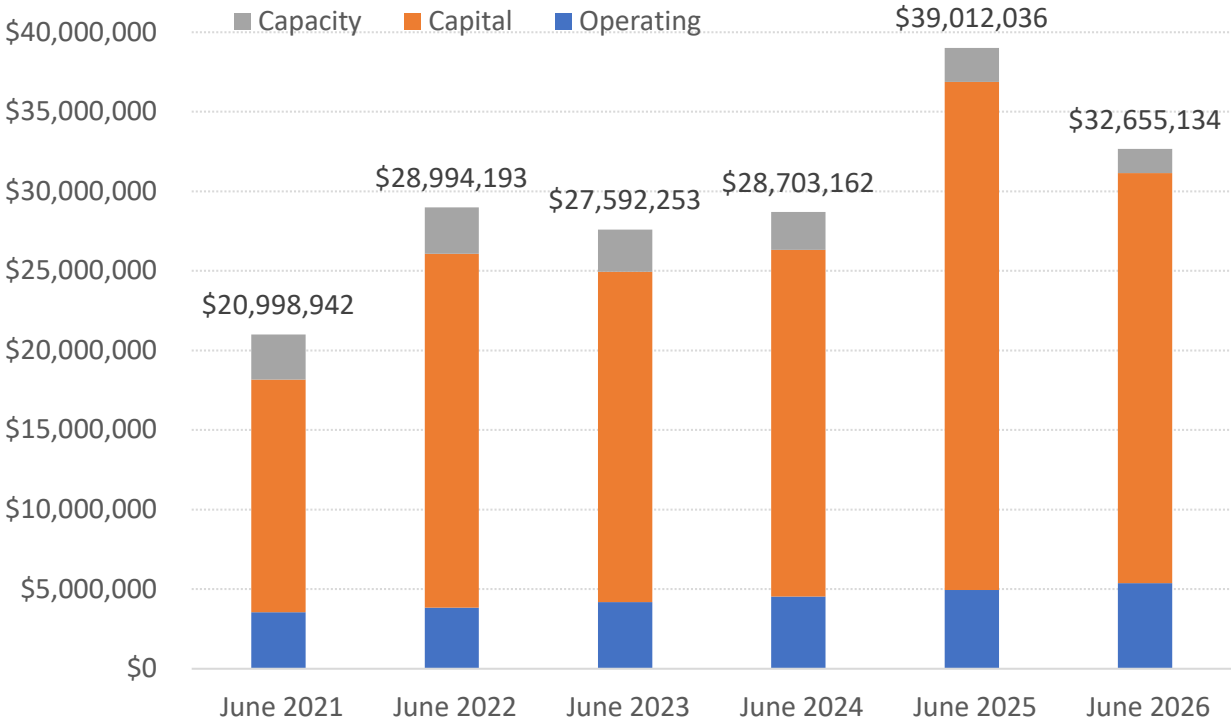
[3] Recommended fee increase each July 1 per the ENR CCI change over the past 12 months (March to March).

## Water Fees Changes

The change in implementation date of the rates reduces revenues to the water fund compared with the revenue projection in the Draft Study. Although the revenues are lower than projected in the Draft Study, revenues at the calculated rate increases of 3% per year would still be sufficient to meet the projected revenue requirement of the system for the next five years, and to fulfill the City's operating cash reserves policy, as well as about 75% of the target cash for capital reserves.

The updated cash flow is shown in **Figure 5**.

**Figure 5**  
**Projected Cash Flow - Water**



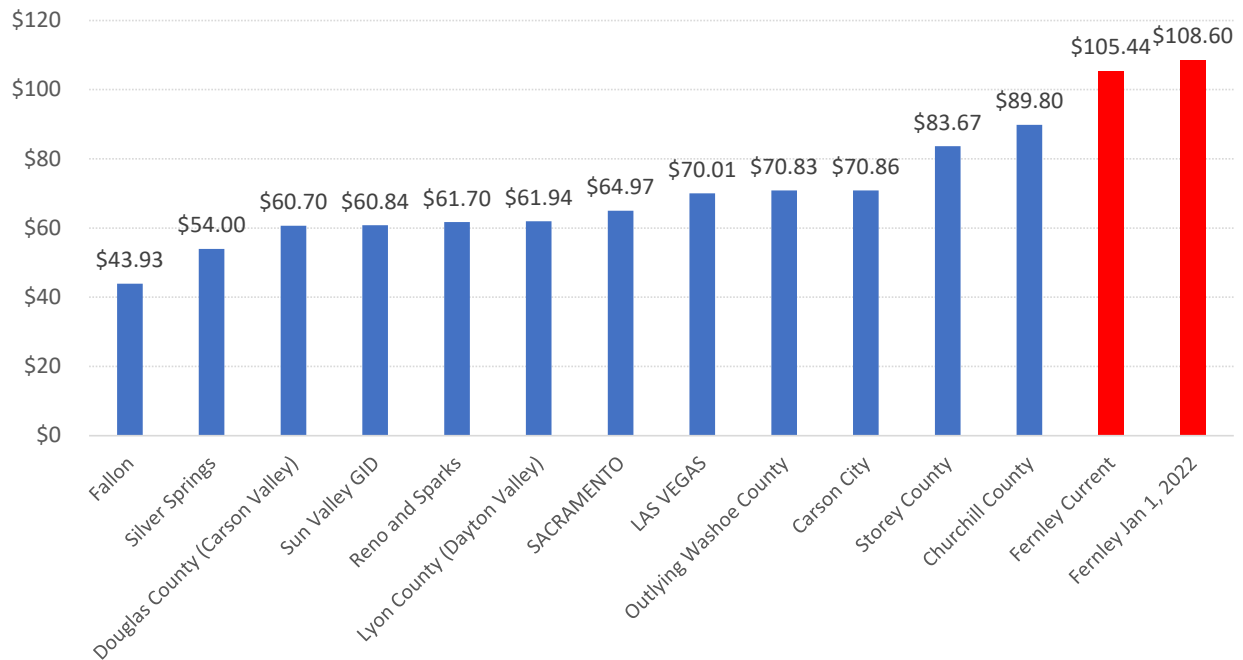
**Figure 6** on the next page compares the current and January 1, 2022 water bill for a typical home using 15,000 gallons in a month with that of other regional communities, as well as Las Vegas and Sacramento.

**Table 5** on the next page shows the updated water connection fee calculation. The updated connection fee is lower than calculated in the Draft Study. Rather than increase from \$5,165 per EDU to \$7,158 per EDU, the fee would increase to \$6,825 per EDU.

**Figure 7** on page 10 compares the current and recommended updated Fernley water connection fee with water connection fees in the region.



**Figure 6**  
**Comparison Water Bills for a Typical Home**



**Table 5**  
**Water Connection Fee Calculation**

Item		Draft Study Calculation	Updated Fee Calculation
<b>Buy-In Fee</b>		<i>Apr-21</i>	<i>Jul-21</i>
Net Book Value		\$27,022,240	\$27,022,240
less Outstanding Principal		\$6,265,948	\$5,965,243
<b>Buy-In Cost of Existing Facilities</b>		<b>\$20,756,292</b>	<b>\$21,056,997</b>
Projected EDUs in 2040	Table B-10	12,625	12,625
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<b>Total Costs</b>		<b>\$13,765,937</b>	<b>\$14,626,989</b>
Future new EDUs [2]	Table B-10	5,626	5,626
<b>New Facilities Fee per EDU</b>	<b>b</b>	<b>\$2,450</b>	<b>\$2,600</b>
<b>Total Connection Fee per Residential Unit or per 1,000 Galls/Day (Commercial) [3]</b>	<b>c = a + b</b>	<b>\$4,094</b>	<b>\$4,268</b>
Current Fee		\$3,474	\$3,474
Percentage Increase in Connection Fee		18%	23%

Source: HEC.

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[1] New growth's share of facilities financing charges.

[2] Anticipated through build-out of tentative maps.

[3] Recommended annual adjustment every July 1 per the ENR CCI change over the past 12 months (Mar-Mar).

**Figure 7**  
**Comparison Connection Fees for Water for a Single Family Unit**

