

HANSFORD

ECONOMIC CONSULTING LLC

Amador Water Agency

Wastewater Capacity Fees Update

June 24, 2022

FINAL DRAFT

**AMADOR WATER AGENCY
NOTICE OF PUBLIC HEARING FOR
UPDATE OF WASTEWATER CAPACITY FEES**

NOTICE IS HEREBY GIVEN that the Amador Water Agency will hold a public hearing at its regular board meeting in the Agency's offices located at 12800 Ridge Road, Sutter Creek or online, on Thursday, July 14, 2022 and on Thursday, July 28, 2022, both starting at 9:00 a.m. to receive public comments on the Agency's proposed Wastewater Capacity Fees. During the corona virus outbreak, AWA's Board of Directors is conducting its meetings online on Zoom. Login information will be published with the posted meeting agenda at the Agency's offices and on its website at <https://amadorwater.org/board-directors/board-minutes-agendas/>.

The proposed Wastewater Capacity Fees are an update to the Agency's existing Capacity or Participation Fees. Capacity Fees are charged by the Agency on new service connections in order to collect a fair share from new customers of the value of the existing wastewater system to which they are connecting, including incremental share or planned improvements that will benefit new wastewater users. The costs of providing service to new customers and the basis for calculating the proposed Capacity Fees are described in a draft Wastewater Capacity Fees Update report that is posted on the Agency's website at <https://amadorwater.org/board-directors/board-minutes-agendas/>, or a copy may be requested by contacting the Agency at info@amadorwater.org or (209) 223-3018.

NOTICE IS FURTHER GIVEN, pursuant to CA Government Code 65009, any challenge of the Agency's Wastewater Capacity Fees in court may be limited to issues raised at the public hearing described in this notice or in written correspondence delivered to the Agency at or prior to the hearing.

Posted: June 28, 2022 through July 28, 2022
Publication dates: July 1, 2022 and July 8, 2022

The following report was prepared by Hansford Economic Consulting LLC.

The analyses and findings contained within this report are based on primary data provided by Amador Water Agency, as well as additional secondary sources of data available as of the date of this report. Updates to information used in this report could change or invalidate the findings contained herein. While it is believed that the primary and secondary sources of information are accurate, this is not guaranteed.

Every reasonable effort has been made in order that the data contained in this study reflect the most accurate and timely information possible. No responsibility is assumed for inaccuracies in reporting by the client, its consultants and representatives, or any other data source used in the preparation of this study. No warranty or representation is made that any of the projected values or results contained in this study will actually be achieved.

Changes in economic and social conditions due to events including, but not limited to, major recessions, droughts, major environmental problems or disasters that would negatively affect operations, expenses and revenues may affect the findings in this study. In addition, other factors not considered in the study may affect findings.

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Section 1: INTRODUCTION AND SUMMARY OF FINDINGS

1.1 INTRODUCTION

The Amador Water Agency (AWA or Agency) provides water and wastewater services to residents and businesses in several communities in Amador County. In 2021, the Agency commissioned a Wastewater Master Plan Study to examine the state of repair of its wastewater systems, and to determine necessary capital improvements to continue to provide safe wastewater collection, treatment, and disposal in adherence with California’s environmental regulations. The purpose of this report is to provide the methodology, calculations, and findings to update the Agency’s wastewater capacity fee based on the information provided in the Wastewater Master Plan Study.

The Agency’s wastewater capacity fee is charged prior to issuance of a Will Serve based on the number of Equivalent Dwelling Units (EDU)s estimated to be generated by the new structure(s) on the property being developed. This report updates the Agency’s wastewater capacity fee, which was last calculated in 2016.

The current wastewater capacity fee is \$10,547 per EDU.

1.2 AUTHORITY TO CHARGE CAPACITY FEES

Under the authority of the Mitigation Fee Act (1987), contained in California Government Code Section 66000 et. seq., the Agency is authorized to collect wastewater capacity fees. When a municipality adopts or updates a capacity fee, it must demonstrate that the fee shall not exceed the estimated reasonable cost of providing the service for which the fee is imposed. Maximum justifiable fees are calculated in this report pursuant to demonstration of the nexus between the amount of projected new development, use of existing infrastructure capacity, and new Agency-provided infrastructure to meet the additional sewer generation of projected new customers in the next twenty years.

The Agency may impose a capacity fee pursuant to Government Code Section 66013(b)(3) for:

- (a) public facilities in existence at the time a charge is imposed (a “buy-in” fee) and/or
- (b) charges for new public facilities to be acquired or constructed in the future that are of proportional benefit to the person or property being charged (a “new facilities” fee).

The fee may include supply or capacity contracts for rights or entitlements, real property interest, and entitlements and other rights of the local agency involving capital expense relating to use of its existing and/or new public facilities.

The capacity fee should be evaluated at least every five years; over time, inflationary adjustments to fees alone may be insufficient as development plans change, anticipated pace of development changes, and infrastructure solutions to service provision are revised.

1.3 METHODOLOGY

The wastewater capacity fee is calculated using a combined cost approach so that customers pay a fee that reflects the value of existing and planned capacity¹. This approach is appropriate when the current system facilities can serve future customers and a portion of the CIP is also related to growth, and it is considered the most rigorous approach². The methodology for calculating the wastewater capacity fee is summarized below:

1. Identify existing capacity and new capacity available in the wastewater systems, expressed in EDUs. New capacity is created by the completion of CIP improvements included in the Master Plan Study.
2. Determine the total cost of facilities and equipment to be included in the fee calculation.
 - a. **Buy-In Cost.** Determine the value of the Agency's current assets that future customers would benefit from.
 - b. **New Facilities Cost.** Determine the cost of new or upgraded infrastructure that expands capacity to the benefit of new users.
3. For Steps 2a and 2b, add the cost of land, then apply other revenue sources (developer contributions, grants, and property taxes for example) as credits to the total cost of facilities to determine net costs to be funded from existing and future customers. Remove facilities and equipment on the current assets list that are included in the CIP to avoid double-counting of costs.
4. Calculate the **debt credit**, which is comprised of the cost of past interest payments paid on debt and the credit of outstanding principal on debt still to be repaid.
5. Add the costs developed in steps 2 through 4 to determine the total cost basis. Adjust the total cost basis by adding cash reserves in the wastewater fund not restricted for spending on facilities that benefit new growth (i.e., cash generated by charging capacity fees) and adding a 3% administration charge. This step determines the **combined cost**.
6. Divide the combined cost by the weighted number of EDUs that can be served by existing and new capacity to calculate the update wastewater capacity fee per EDU.

1.4 CALCULATED WASTEWATER CAPACITY FEE

Table 1 presents the current and the recommended updated wastewater capacity fee for 2022. The fee would continue to be charged per Equivalent Dwelling Unit (EDU); however, the updated fee

¹ Combined Cost Approach, page 337 of the American Water Works Association M1 Manual.

² WEF Manual of Practice No. 27, page 210, "This approach is generally the most technically rigorous of the calculation approaches. It involves explicit determination of available capacity value in the existing system, and apportionment of future capital costs between existing users and new development."

schedule includes provision to charge for new Accessory Dwelling Units (ADUs). One new home is charged one EDU; provided, however, that if an Accessory Dwelling Unit (ADU) or Junior ADU (JADU) is part of an application for a Will Serve, the Agency may charge a wastewater capacity fee per building square foot of the new ADU or JADU.

Creation of ADUs is permitted by California law on all residential and mixed-use zoned properties. Per Government Code 65852.2, capacity fees for ADUs must be charged on a per building square foot or fixture unit basis. Capacity fees for attached ADUs and JADUs may only be charged if the unit is constructed with a new single-family home. A new detached ADU may be charged a capacity fee whenever it is built.

Table 1
Current and Recommended Updated Wastewater Capacity Fee

Item	Current Fee per EDU	Recommended Updated Fee [1]
Wastewater Capacity Fee per EDU	\$10,547	\$16,390
ADU Capacity Fee per Bldg. Sq. Ft. [1], [2]	--	\$7.45

Source: HEC June 2022.

[1] The capacity fees will increase automatically every May 1 using the April to April twelve-month change in the Engineering News Record Construction Cost Index.

[2] Excludes garage and covered outdoor areas.

It is recommended that the Agency update the Wastewater Capacity Fee from \$10,547 per EDU to \$16,390 per EDU, and adopt a fee per building square foot of \$7.45 for ADUs. The Agency should update the Wastewater Capacity Fee annually at the same time as the Water Capacity Fee is updated. The Water Capacity Fee resolution adopted June 2021 states that the fee shall be adjusted annually based on the change in the Engineering News-Record Construction Cost Index, 20-Cities Average, for the previous April 1 to March 31 period. The updated fee would be implemented May 1 each year.

Periodic review of the Wastewater Capacity Fee is also recommended whenever estimated costs are revised pursuant to an update of the Agency’s Wastewater Master Plan, or whenever there are land use changes made by Amador County that would affect projected growth in the Agency’s service territory.

Comparison Regional Fees

A comparison of the current and recommended wastewater capacity fee for a new home with three bedrooms is provided in **Table 2** and illustrated in **Figure 1**.

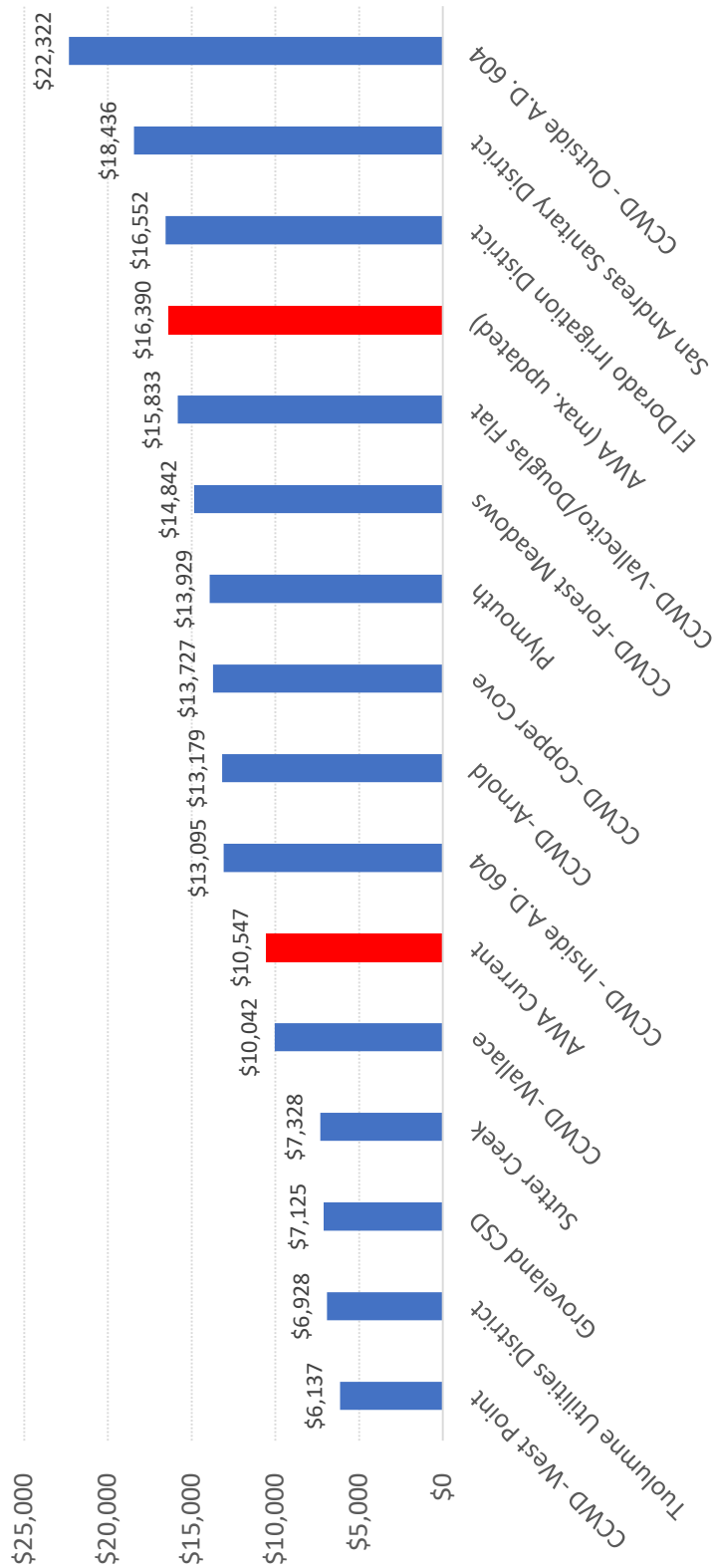
Table 2
Comparison of Regional Wastewater Capacity Fees

Wastewater Provider	SF Home Fee
Amador Water Agency	
AWA Current	\$10,547
AWA All Systems (max. updated)	\$16,390
Calaveras County Water District	
	<i>as of 7/1/2022</i>
West Point	\$6,137
Copper Cove	\$13,727
Inside Assessment District 604	\$13,095
Outside Assessment District 604	\$22,322
Arnold	\$13,179
Forest Meadows	\$14,842
Vallecito/Douglas Flat	\$15,833
Wallace	\$10,042
San Andreas Sanitary District	<i>3-bdrm home</i> \$18,436
Tuolumne Utilities District	<i>3 lift stations</i> \$6,928
Groveland CSD	\$7,125
El Dorado Irrigation District	\$16,552
Cities	
Plymouth	<i>as of 7/1/2022</i> \$13,929
Sutter Creek	\$7,328

Source: Website information or telephone call. comps

Even though the recommended increase in the wastewater capacity fee is a 55% increase, the updated fee would be comparable with capacity fees set by other municipal providers for new wastewater service in the region.

Figure 1
Regional Wastewater Capacity Fees for a New Home



Section 2: CAPACITY FEE CALCULATIONS

Capacity fees are charged to pay for current and future Agency facilities that new customers benefit from and may use. Capacity fees pay for major infrastructure such as collection pipes, lift stations, treatment and disposal facilities, and any specialized equipment used to service the wastewater system(s), as well as land.

2.1 CURRENT AND FUTURE WASTEWATER SYSTEMS CAPACITY

The first step in determining capacity fees is establishing the current number of customers expressed as EDUs, and estimated growth in EDUs over the 20-year planning period. Lumos Engineering, which performed the Wastewater Master Plan Study, provided the EDU count by wastewater system, which is summarized in **Table 3**.

Active and Active Standby customers (total of 1,383 EDUs) have paid for their share of capacity in the wastewater systems. These customers have paid for the generation of 164,470 gallons of effluent per day. The existing wastewater systems have capacity for daily flow of 281,960 gallons. In aggregate, remaining capacity in the wastewater systems is 117,490 gallons per day. With a planning design standard of 200 gallons per day per EDU there is remaining capacity for an additional 514 wastewater EDUs.

Table 4 summarizes the current remaining capacity for sewer collection, treatment and disposal by wastewater system, and additional capacity that would be added in the next 20 years if the improvements in the Master Plan Study are completed. The growth in EDUs for each system over the next 20 years is estimated in the Master Plan Study. There is deficiency in capacity in the Pine Grove and Martell wastewater systems without improvements. In addition, although the development timeframe is unknown, there is potential additional demand in the Fairway Pines/ Mace Meadows system that requires improvements to increase capacity for 75 EDUs.

In total, the capacity of the wastewater systems would increase from 281,960 gallons per day to 317,560 gallons per day in the next 20 years with the improvements included in the Master Plan Study. This is the equivalent of adding capacity for 178 EDUs (247 minus 69 EDUs shown in **Table 4**). The additional capacity for Lake Camanche in the next 20 years is not true new capacity; because this system is under a building moratorium imposed by the State, improvements would allow the full capacity of the wastewater system to be used.

**Table 3
Summary of Current and Forecasted EDUs**

System Name	User Type	Existing EDU Count					Projected EDU Count in 2042				20-Yr Est. Growth
		Active Customers [1]		Active Standby [2]	Inactive Standby [3]	Total Active + Standby	Residential	Non-Residential	Total		
		Residential	Non-Res							Subtotal	
Eagles Nest	Residential	9	0	9	0	5	14	9	0	9	0
Surrey Junction	Residential	8	0	8	0	0	8	8	0	8	0
Wildwood Estates	Residential	34	0	34	0	3	37	36	0	36	2
Gayla Manor	Residential	80	0	80	0	0	80	80	0	80	0
Viewpoint	Residential	4	0	4	0	1	5	4	0	4	0
Fairway Pines/Mace Meadows	Residential	66	0	66	0	46	112	69	0	69	3
Jackson Pines	Residential	76	0	76	0	2	78	80	0	80	4
Tiger Creek Estates	Residential	5	0	5	0	3	8	5	0	5	0
Pine Grove	Mixed-Use	14	70	84	58	29	171	15	104	119	35
Subtotal Leachfield Systems		296	70	366	58	89	513	306	104	410	44
Camanche	Mixed-Use	338	9	347	0	0	347	338	9	347	0
Martell [4], [5]	Mixed-Use	51	561	612	0	59	671	53	834	887	216
All Systems		685	640	1,325	58	148	1,531	697	947	1,644	260

Source: Lumos Engineering, April 1, 2022.

[1] Active Customers: existing connections actively generating sewer flows and/or paying sewer bills.

[2] Active Standby Customers: customers for which capacity fees are not due, standby fees are being paid, and are not yet connected to the system.

[3] Inactive Standby Customers: customers for which capacity fees are due, standby fees are not being paid, and are not yet connected to the system.

[4] Martell EDU total excludes 16 active residential and 1 inactive standby connection that discharge by gravity direct to the City of Jackson WWTP.

[5] Of the 59 EDUs that are inactive Standby, only 37 will pay connection fees.

grow sum

**Table 4
Remaining and Added Capacity by Wastewater System**

Wastewater System	Actual Flows [1]			Paid-For EDU Flows [2]			20-Yr Est. of Add'l EDUs	Capacity Deficiency (in EDUs)	Capacity Added by 2042 (EDUs)	Total 20-Yr Capacity (gpd)
	Max. Flow Capacity	Current Avg. Daily Flow	Remaining Capacity	Paid For Daily Flow	Remaining Capacity	Supportable New EDUs [3]				
	a	b	c = a-b	d	e = a-d	f = e/200				
Eagles Nest	2,800	1,590	1,210	1,590	1,210	6	0	0	2,800	
Surrey Junction	2,640	1,240	1,400	1,240	1,400	7	0	0	2,640	
Wildwood Estates	11,000	2,570	8,430	2,570	8,430	42	2	0	11,000	
Gayla Manor [4]	7,200	4,390	2,810	4,390	2,810	14	0	0	7,200	
Viewpoint	2,000	530	1,470	530	1,470	7	0	0	2,000	
Fairway Pines/Mace Meadows	23,100	10,260	12,840	10,260	12,840	64	3	0	38,700	
Tiger Creek Estates	2,520	200	2,320	200	2,320	11	0	0	2,520	
Jackson Pines	21,000	9,060	11,940	9,060	11,940	59	4	0	21,000	
Pine Grove	28,700	10,530	18,170	22,130	6,570	32	35	3	43,700	
Subtotal Leachfield Systems	100,960	40,370	60,590	51,970	48,990	242	44	3	131,560	
Lake Camanche [5]	60,000	46,080	13,920	46,080	13,920	0 [4]	0	0	60,000	
Martell [6]	121,000	66,420	54,580	66,420	54,580	272	275	3	126,000	
Total Capacity (gpd)	281,960	152,870	129,090	164,470	117,490	514	319	6	317,560	

Source: Table 2-1, Master Plan Study.

[1] Source - Lumos Engineering, April 2022.

[2] Source - HEC, April 2022.

[3] Supportable number of EDUs that will pay capacity fees.

[4] Gayla Manor wastewater is treated before disposal.

[5] Lake Camanche has a building moratorium. This table assumes the upgraded compliant plant has the same capacity as the current plant, allowing development of a further 69 EDUs upon removal of the Cease and Desist Order. It does not create additional capacity.

[6] Only includes sewer flows piped to Sutter Creek wastewater treatment plant.

2.2 COST BASIS OF FEE

There are three cost components included in the cost basis for the wastewater capacity fee: the buy-in cost, the new facilities cost, and debt credit.

1. Buy-In Cost Basis

There are five different options (methodologies) that could be used in the valuation of existing assets to establish the buy-in fee cost basis. Supporting **Table A-1** in Appendix A provides the list of AWA wastewater assets upon which the valuation calculation under each of the options is based.

The five valuation options are generated by the treatment of the value of the currently-owned assets. Options 1 and 2 use the original cost approach where the buy-in fee reflects the original investment in existing capacity, paying an amount similar to what the existing customers paid for the capacity (or the remaining value of the original investments). A concern with this approach is that it is impractical because insufficient capital is raised to ensure longevity of the asset.

- Option 1 bases the buy-in fee on the original cost of the assets (when it was purchased or constructed).
- Option 2 bases the buy-in fee on the net book value of the Agency's assets. This methodology is based on an accounting perspective that depreciates the original cost of the assets and assumes that anything beyond its theoretical useful life no longer has any value to new customers.

Many wastewater capacity fee studies calculate the buy-in fee using a replacement cost methodology (Option 3). Under this approach, all of the agency's current assets are valued at the current cost to replace them. This methodology is most appropriate in more urban settings or areas with greater financial resources where old facilities and equipment are usually replaced with new facilities and equipment. This approach may also be modified to deduct depreciation from the value of the assets using a straight-line depreciation methodology on either the replacement cost or the original cost of the assets³.

- Option 4 only accounts for the value of assets that still have a useful life (in theory) by deducting the replacement cost depreciation.
- Option 5 recognizes the actual depreciation that has been accounted for on the Agency's books (based on original cost), and that existing customers have paid for to date. Under this option, assets that have in theory exceeded their useful life may still have a value associated with them that new development would pay for a portion of.

Table 5 summarizes the assets valuation and cost basis under each of the five methodologies. Grant-funded portions of assets are removed, as are contributed capital (assets that were built by a private party and dedicated to the Agency). The cost of land is added. Cost of assets that will be rehabilitated or replaced as part of the CIP would be deducted in the calculation; however, none

³ American Water Works Association M1 Manual page 332 describes the four valuation approaches and states, "A combination of the approaches may also be used."

were identified. The cost basis for the buy-in portion of the fee calculation ranges from \$6.2 million (Option 2) to \$27.5 million (Option 3).

Table 5
Summary Valuation of Existing Assets

Fee Calculation	Option 1	Option 2	Option 3	Option 4	Option 5
	Original Cost	Original Cost less Depreciation	Replacement Cost	Replacement Cost less Depreciation	Replacement Cost less Orig. Depr.
All Systems					
Value of Assets	\$16,744,656	\$6,782,471	\$30,872,217	\$18,746,177	\$20,910,032
less Grant-Funded Assets [1]	(\$1,456,891)	(\$692,023)	(\$3,023,198)	(\$1,587,179)	(\$2,258,331)
less Contributed Capital	(\$161,993)	(\$40,146)	(\$410,909)	(\$293,204)	(\$289,062)
plus Land	\$100,424	\$100,424	\$100,424	\$100,424	\$100,424
Total All Systems Value for Buy-In	\$15,226,196	\$6,150,725	\$27,538,534	\$16,966,217	\$18,463,063
<i>Percentage Collection</i>	79%	74%	78%	82%	76%
Collection	\$12,039,006	\$4,552,984	\$21,598,087	\$13,891,534	\$14,122,019
Treatment & Disposal	\$3,187,190	\$1,597,742	\$5,940,446	\$3,074,683	\$4,341,044

Source: AWA, HEC, and the Reed Group 2016 Participation Fees Study.

buyin

[1] Grant-funding paid for 73% of Pine Grove improvements completed in 2011.

While all five approaches to setting the buy-in fee are legitimate approaches described in both the American Water Works Association M1 Manual and the Water Environment Federation Manual of Practice no. 27, Option 5 is recommended as the most appropriate for AWA’s wastewater systems. This approach recognizes the cost of providing capacity to customers as if the capacity were added at the time it was needed for new growth and it compensates the existing customers for carrying costs of excess capacity to date. In addition, while many of the Agency’s assets have theoretically exceeded their useful life, they are in fact perfectly capable of performing as required. **The recommended buy-in cost basis is \$18.5 million.**

2. New Facilities Cost Basis

The estimated new facilities cost that growth is at least partially responsible for is detailed in the Master Plan Study and summarized in **Table 6**. Capacity fees are calculated using today’s estimates of CIP costs, as the fees should be indexed to inflation and be adjusted automatically every year. The total new facilities cost that growth is at least partially responsible for is estimated at \$39.4 million. The Master Plan Study identified that 38% of this total cost is the responsibility of new customers. **The new facilities cost basis is \$14.8 million.**

**Table 6
Growth Cost Responsibility of Estimated 20-Year CIP Costs**

System	CIP Project		Fee Portion [1]	Total Project Cost(1)	Percentage Allocation to Growth	Growth Cost Responsibility	Ratepayer Cost Responsibility
	No.	Project Name					
Near Term CIP (0-5 YRS): FY 22/23 - FY 26/27				<i>Revenue Source ---></i>		<i>Capacity Fees</i>	<i>Rates</i>
Camanche	16	Collection System Flow Monitoring and I&I Study	C	\$25,000	23%	\$5,750	\$19,250
Camanche	17	Lift Station A, B, and D Security Fencing	C	\$105,900	23%	\$24,357	\$81,543
Camanche	18	Lift Station C and D Backup Power	C	\$109,400	23%	\$25,162	\$84,238
Camanche	19	Lift Station C Conversion	C	\$1,180,000	23%	\$271,400	\$908,600
Camanche	20	Lift Station A, B, and D Corrosion Mitigation	C	\$429,000	23%	\$98,670	\$330,330
Camanche	21	Lift Station A, B, and D Controls and SCADA Integration	C	\$249,000	23%	\$57,270	\$191,730
Camanche	22	WWTP Preliminary Engineering Report & EIR Amendment	T	\$250,000	17%	\$42,500	\$207,500
Camanche	23	WWTP Treatment, Disposal, and Effluent Storage Upgrades	T	\$16,237,000	17%	\$2,760,290	\$13,476,710
Martell	24	Collection System Flow Monitoring and I&I Study	C	\$25,000	10%	\$2,500	\$22,500
Martell	25	Radio Telemetry Study	C	\$15,000	10%	\$1,500	\$13,500
Martell	26	Regional Lift Station Engineering	C	\$75,000	20%	\$15,000	\$60,000
Martell	27	Regional Lift Station and Collection System Improvements	C	\$3,880,000	20%	\$776,000	\$3,104,000
Martell	28	Lift Station 2 Improvements	C	\$728,000	20%	\$145,600	\$582,400
Martell	29	Lift Station 2 Security Fencing	C	\$39,300	20%	\$7,860	\$31,440
Martell	30	Sierra West Lift Station SCADA Upgrades	C	\$24,000	50%	\$12,000	\$12,000
Wildwood Estates	42	Upgradient Monitoring Well	T	\$50,500	8%	\$4,040	\$46,460
Wildwood Estates	43	Preliminary Engineering Report	T	\$50,000	8%	\$4,000	\$46,000
Wildwood Estates	44	Groundwater Nitrogen Mitigation	T	\$1,841,600	8%	\$147,328	\$1,694,272
Gayla Manor	45	Lift Station Security Fencing	C	\$35,000	2%	\$700	\$34,300
Gayla Manor	46	Lift Station Electrical Stand and Shade Structure Replacement	C	\$34,000	2%	\$680	\$33,320
Gayla Manor	48	Storage Pond Dam Geotech. Investigation & Eng. Evaluation	T	\$45,000	2%	\$900	\$44,100
Pine Grove	56	HWY 88 Sewer Relocation Project	C	\$843,100	36%	\$303,516	\$539,584
Jackson Pines	58	Lift Station Security Fencing	C	\$48,100	5%	\$2,405	\$45,695
Total 0-5 YR Cost:				\$26,318,900		\$4,709,428	\$21,609,472
Long Term CIP (6-10 YRS): FY 27/28 - FY 31/32							
Martell	31	Sierra West Lift Station Capacity Improvements	C	\$1,797,000	100%	\$1,797,000	\$0
Martell	32	Collection System Capacity Upgrades	C	\$944,000	100%	\$944,000	\$0
Martell	34	Hwy 49 Gravity Sewer Pipeline Replacement	C	\$1,073,000	20%	\$214,600	\$858,400
Gayla Manor	47	WWTP Controls and SCADA Integration	T	\$46,500	2%	\$930	\$45,570
Gayla Manor	49	Storage Pond Dam Repair	T	\$1,042,000	2%	\$20,840	\$1,021,160
Fairway/Mace	52	Lift Station Controls and SCADA Integration	C	\$39,000	42%	\$16,380	\$22,620
Fairway/Mace	53	Lift Station Capacity Upgrades	C	\$1,191,900	100%	\$1,191,900	\$0
Fairway/Mace	54	Mace Meadows Ph. 2 Leach Field Expansion (land acquisition)	T	\$2,525,300	100%	\$2,525,300	\$0
Pine Grove	57	Phase 2 Leach Field Expansion & Additional Monitoring Wells	T	\$2,714,000	100%	\$2,714,000	\$0
Jackson Pines	59	Flow Meters at Lift Stations A & B	C	\$38,500	5%	\$1,925	\$36,575
Jackson Pines	60	Lift Stations Controls and SCADA Integration	C	\$78,000	5%	\$3,900	\$74,100
Tiger Creek	62	Lift Station Controls and SCADA Integration	C	\$39,000	44%	\$17,160	\$21,840
Total 6-10 YR Cost:				\$11,528,200		\$9,447,935	\$2,080,265
Long Term CIP (11-15 YRS): FY 32/33 - FY 36/37							
Surrey Junction	41	Install Monitoring Wells & Develop Monitoring Plan	T	\$97,000	33%	\$32,010	\$64,990
Gayla Manor	50	Install Monitoring Wells & Develop Monitoring Plan (Leach Field B)	T	\$97,000	2%	\$1,940	\$95,060
Viewpoint	51	Install Monitoring Wells & Develop Monitoring Plan	T	\$97,000	43%	\$41,710	\$55,290
Jackson Pines	61	Install Monitoring Wells & Develop Monitoring Plan	T	\$97,000	5%	\$4,850	\$92,150
Tiger Creek	63	Install Monitoring Wells & Develop Monitoring Plan	T	\$97,000	44%	\$42,680	\$54,320
Total 11-15 YR Cost:				\$485,000		\$123,190	\$361,810
Long Term CIP (16-20 YRS): FY 37/38 - FY 41/42							
Martell	33	Capacity Purchase from Sutter Creek WWTP	T	\$279,700	100%	\$279,700	\$0
Eagles Nest	39	Leach Field Replacement (Flooding/Ponding Mitigation)	T	\$675,000	36%	\$243,000	\$432,000
Eagles Nest	40	Install Monitoring Wells & Develop Monitoring Plan	T	\$97,000	36%	\$34,920	\$62,080
Total 15-20 YR Cost:				\$1,051,700		\$557,620	\$494,080
TOTAL 20-YR CIP Estimated Costs				\$39,383,800		\$14,838,173	\$24,545,627
Percentage Allocation of Costs to Growth and Current Customers						38%	62%

Source: Lumos Engineering and HEC (collection or treatment/disposal column).

cip alloc

[1] Collection facility = C; Treatment/Disposal facility = T.

3. Debt Credit

New customers should pay for past interest payments made by existing customers for inter-Agency loans made from the water fund to the wastewater fund and they should receive a credit for the amount of outstanding principal for those loans because when they become rate-paying customers, they will pay for debt in their rates. Detail of interest payments made and outstanding principal by loan is provided in **Table 7**.

In total, the debt credit is \$0.7 million.

Table 7
Debt Credit Calculation by Internal Loan

Beneficiary System	Fiscal Year		Interest	Outstanding	Debt Credit
	Final Payment	Internal AWA Loan #	Payments Made	Principal	
			a	b	c = a-b
			<i>through June 30, 2022</i>		
General	2033	2013-48	\$1,911	\$19,825	(\$17,914)
General	2042	2012-14	\$5,335	\$57,853	(\$52,518)
General	2042	2005-64	\$32,530	\$351,096	(\$318,566)
Pine Grove	2023	2004-39	\$59,921	\$20,432	\$39,490
Leachfield Systems	2040	2010-09A	\$15,284	\$172,684	(\$157,399)
Leachfield Systems	2040	2010-09B	\$23,299	\$263,232	(\$239,934)
Total			\$138,280	\$885,121	(\$746,841)

Source: AWA.

outst

2.3 CAPACITY FEE CALCULATION

The total cost basis (buy-in and new facilities costs as well as debt credit) included in the capacity fee is \$32.6 million. Adjustments to the cost basis include addition of cash reserves and administration costs.

- Cash reserves of \$106,400 information is provided in **Appendix Table A-2**.
- An administrative fee of three-percent of the cost basis is added for collection and handling of the fees, public hearing costs⁴, and periodic updates of the fee program.

The capacity fee combined cost basis with adjustments is \$33.6 million.

⁴ Government Code 66016 (c).

The combined cost is divided by the weighted average number of EDUs, which includes the total number of EDUs that can be served by existing capacity and the total number of EDUs that can be served by new capacity created by completion of the improvements in the Master Plan Study. The fee calculation is shown in **Table 8**.

Table 8
Calculated Updated Wastewater Capacity Fee per EDU

Fee Component		Collection	Treatment & Disposal	Total Calculated Fee
Cost Basis				
Buy-In Cost	Option 5	\$14,122,019	\$4,341,044	\$18,463,063
New Facilities Cost		\$5,937,235	\$8,900,938	\$14,838,173
Debt Credit		(\$571,243)	(\$175,598)	(\$746,841)
Subtotal Cost Basis		\$19,488,010	\$13,066,385	\$32,554,395
<i>Percentage of Cost Basis</i>		<i>60%</i>	<i>40%</i>	
Adjustments				
plus Net Cash Reserves [1]		\$63,685	\$42,700	\$106,385
plus Administration [2]	3%	\$584,640	\$391,992	\$976,632
Subtotal Adjustments		\$648,325	\$434,691	\$1,083,017
Combined Cost Basis		\$20,136,337	\$13,501,076	\$33,637,412
Capacity				
Existing Capacity (EDUs)				1,875
New Capacity (EDUs)				178
Total EDUs for Weighted Average	[3]			2,053
Maximum Wastewater Capacity Fee per EDU (rounded)	[4]	\$9,810	\$6,580	\$16,390

Source: AWA Financial records, Lumos Engineering, and HEC.

part fee

[1] Fund reserves 6/30/2021 plus \$500,000 repayment from water fund ----- \$1,247,896
less capacity fees restricted for future capacity expansion ----- \$1,141,511

[2] Charged for the costs of collection and handling of the fees, public hearing costs, and periodic updates of the fee (Government Code 66016 (c)).

[3] Determination of number of EDUs	Existing Facilities	New Facilities
EDUs that have paid Capacity Fees	1,383	--
Remaining Capacity (excl. 22 Amador Co. connections)	492	--
Added Capacity (20yr growth)	--	178

[4] The capacity fees will increase automatically every year on May 1 using the April to April twelve-month change in the Engineering News Record Construction Cost Index.

The calculated maximum justifiable wastewater capacity fee is \$16,390 per EDU using the Option 5 buy-in cost basis.

The updated fee schedule includes provision to charge for new ADUs. Creation of ADUs is permitted by California law on all residential and mixed-use zoned properties. Per Government Code 65852.2, capacity fees for ADUs must be charged on a per building square foot or fixture unit basis. Capacity fees for attached ADUs and JADUs may only be charged if the unit is constructed with a new single-family home. A new detached ADU may be charged a capacity fee whenever it is built.

To establish the fee for ADUs, the fee for a home (one EDU) is divided by the typical size of a new home in the region. The typical size of a new home in AWA’s wastewater systems is estimated at 2,200 building square feet based on data presented in **Appendix Table A-3**. The calculation of the updated wastewater capacity fee, and comparison with the current wastewater capacity fee, is shown in **Table 9**.

Table 9
Current and Calculated Wastewater Capacity Fee Schedule

Item	Current Fee per EDU	Recommended Updated Fee [1]
Wastewater Capacity Fee per EDU	\$10,547	\$16,390
ADU Capacity Fee per Bldg. Sq. Ft. [1], [2]	--	\$7.45

Source: HEC June 2022.

[1] The capacity fees will increase automatically every May 1 using the April to April twelve-month change in the Engineering News Record Construction Cost Index.

[2] Excludes garage and covered outdoor areas.

AWA Board Options

The calculated fees are the maximum justifiable fees that can be imposed by the AWA Board of Directors. Although this Study recommends the fee schedule calculated under Option 5, the Board could choose a fee up to the maximum fee calculated under any of the five buy-in cost basis options. **Table 10** shows the fee under each option that the Board could adopt while ensuring that the fee is based on the reasonable costs of providing the service.

Table 10
Calculated Maximum Justifiable Wastewater Capacity Fee by Buy-In Methodology

Maximum Justifiable Wastewater Capacity Fee	Option 1	Option 2	Option 3	Option 4	Option 5
	Original Cost	Original Cost less Depreciation	Replacement Cost	Replacement Cost less Depreciation	Replacement Cost less Orig. Depr.
Collection	\$8,760	\$5,010	\$13,560	\$9,680	\$9,810
Treatment & Disposal	\$6,010	\$5,200	\$7,380	\$5,960	\$6,580
Wastewater Capacity Fee per EDU	\$14,770	\$10,210	\$20,940	\$15,640	\$16,390
Per ADU Bldg. Sq. Ft. [1], [2]	\$6.71	\$4.64	\$9.52	\$7.11	\$7.45

Source: HEC June 2022.

options

[1] The capacity fees will increase automatically every May 1 using the April to April twelve-month change in the Engineering News Record Construction Cost Index.

[2] Excludes garage and covered outdoor areas.

Section 3: CAPACITY FEE ADOPTION AND ADMINISTRATION

3.1 CAPACITY FEE ADOPTION AND FUTURE ADJUSTMENTS

Pursuant to California Government Code 66016, prior to increasing an existing fee or adopting a new fee, an agency must hold at least one open and public meeting. Notice of the time and place of the meeting, including a general explanation of the matter to be considered, and a statement that all supporting studies and information are available to the public, shall be noticed at least 10 days prior to the meeting. Increases to an existing fee or adoption of a new fee may be made by ordinance or resolution.

It is recommended that the Agency update the Wastewater Capacity Fee annually at the same time as the Water Capacity Fee is updated. The Water Capacity Fee resolution adopted June 2021 states that the fee shall be adjusted annually based on the change in the Engineering News-Record Construction Cost Index, 20-Cities Average, for the previous April 1 to March 31 period. The updated fee would be charged May 1 each year. Periodic review of the Wastewater Capacity Fee is also recommended whenever estimated costs are revised pursuant to an update of the Agency's Wastewater Master Plan, or whenever there are land use changes made by Amador County that would affect projected growth in the Agency's service territory.

3.2 MITIGATION FEE ACT COMPLIANCE

The Agency must deposit capacity fee revenues in a separate Capacity Fees Fund to avoid any comingling with other monies of the Agency. Any interest income earned must also be deposited into the Capacity Fees Fund. In addition, the Agency must comply with annual and five-year reporting requirements for the Capacity Fees Fund.

Within 180 days of the end of a fiscal year, the following is to be furnished for the prior fiscal year:

1. A description of the charges deposited in the fund,
2. The beginning and ending balance of the fund,
3. The amount of the fees collected and interest earned,
4. An identification of each public improvement for which fees were expended and the amount of expenditure for each improvement, including the percentage of the total cost of the improvement that was funded with capacity fees if more than one source of funding was used,
5. An identification of each public improvement on which charges were expended that were completed during the fiscal year, and each improvement anticipated to be undertaken in the following fiscal year, and
6. A description of any interfund transfer or loan made from the Capacity Fee Fund, identification of any public improvements on which any transferred monies are, or will be, expended, and a description of repayment terms.

All of the above information may be included in the Agency's annual financial report.

3.3 CAPACITY FEE CREDITS AND REIMBURSEMENTS

The Agency may provide fee credits and reimbursements to developers who dedicate land or construct facilities included in the New Facilities Fee portion of the capacity fees with private financing. The credit / reimbursement may only be up to the cost of the improvement, as included in the new facilities fee program, or the actual cost paid by the developer, whichever is lower. No credit or reimbursement will be allowed for costs incurred that are higher than estimated in the fee program, and the administrative portion of the fee is excluded from fee credits / reimbursements.

Credits. Once fee credits have been determined, they will be used at the time the respective fees would be due.

Reimbursements. Reimbursements would be due to developers who advance-fund new facilities in excess of their fair share of the facility costs. Developers must enter into a reimbursement agreement with the Agency to receive reimbursements. Fee credits would be provided up to the fair share cost for the developer, then reimbursements would be due to the developer once revenue collections have been made from other developers. Reimbursement priority is a “first in, first out” system. As money becomes available, the first in would receive reimbursement first. Developers may have to wait some time before their reimbursement is paid in full. The use of accumulated fee revenues shall first be used for Agency-determined priority capital improvement projects, and secondly for repayment of accrued reimbursement to private developers. Reimbursements are only an obligation of the Capacity Fee Fund, not any other Agency fund.

Fee credits/reimbursements will be adjusted annually by the inflation factor used to adjust the wastewater capacity fee.

APPENDIX A

WASTEWATER CAPACITY FEE

SUPPORT TABLES

Table A-1
Amador Water Agency Wastewater Financial Analysis 2022
List of Wastewater Assets

DRAFT

Description	Fee Portion	Purchase Year	Life	Remaining Life	Amount		Depreciated Asset Value	Inflation Adj.	Replacement Cost	Replacement Cost less	Replacement Cost less Orig. Depr.
					Original Cost	Depreciated					
	[1]		years	years	Option 1	Option 2	[2]	Option 3	Option 4	Option 5	
					a	b	c = a-b	d	e = a*d	f = c*d	g = e-b
CAMANACHE											
Pump Replacement On Mister Systems	T	2010	10	0	\$21,017	\$21,017	\$0	1.49	\$31,295	\$31,295	\$10,277
Financial Plan	T	2004	40	22	\$281	\$126	\$154	1.84	\$518	\$233	\$392
Lift Station ""A"" Overhaul	C	2013	40	31	\$8,332	\$1,875	\$6,458	1.37	\$11,448	\$2,576	\$9,574
Lift Station ""C""	C	2004	40	22	\$13,236	\$5,956	\$7,280	1.84	\$24,410	\$10,985	\$18,454
Csa Transfer	C	2003	40	21	\$2,429,782	\$1,154,146	\$1,275,635	1.96	\$4,758,836	\$2,260,447	\$3,604,690
Csa Transf - Sewer System	C	2003	17	0	\$776,061	\$776,061	\$0	1.96	\$1,519,949	\$1,519,949	\$743,889
Csa Transf - Aggregate Expenses	C	2003	11	0	\$90,859	\$90,859	\$0	1.96	\$177,951	\$177,951	\$87,092
Csa Transfer - Aggregate Expenses	C	2003	5	0	\$170,266	\$170,266	\$0	1.96	\$333,474	\$333,474	\$163,208
Csa Transf - Aggregate Expenses	C	2003	10	0	\$13,793	\$13,793	\$0	1.96	\$27,014	\$27,014	\$13,221
Video Sewer Lines	C	2004	40	22	\$37	\$17	\$20	1.84	\$68	\$30	\$51
Emergency Lift Station Pump	C	2004	40	22	\$561	\$252	\$309	1.84	\$1,035	\$466	\$782
Camanche 3B Wastewater	C	2013	40	31	\$827	\$186	\$641	1.37	\$1,137	\$256	\$951
Gonzales Sewer Mlx	C	2009	20	7	\$5,177	\$3,365	\$1,812	1.53	\$7,913	\$5,143	\$4,548
Csa Iii I&l Corrections	C	2006	40	24	\$36,111	\$14,445	\$21,667	1.70	\$61,485	\$24,594	\$47,041
Short Term System Improvements	C	2007	15	0	\$566,427	\$566,427	\$0	1.65	\$935,399	\$935,399	\$368,973
Vehicle Purchase	C	2004	5	0	\$29,500	\$29,500	\$0	1.84	\$54,404	\$54,404	\$24,904
Camanche Monitoring Wells	T	2019	50	47	\$60,357	\$3,621	\$56,735	1.16	\$70,223	\$4,213	\$66,601
Camanche WW Standby Generators	T	2020	20	18	\$75,998	\$7,600	\$68,398	1.15	\$87,126	\$8,713	\$79,526
Subtotal Camanache					\$4,298,621	\$2,859,512	\$1,439,110		\$8,103,685	\$5,397,142	\$5,244,174
MARTELL											
					Collection System Only (treated by :	Option 1	Option 2		Option 3	Option 4	Option 5
Lift Station #2 Master Meter	C	2013	40	31	\$9,021	\$2,030	\$6,991	1.37	\$12,395	\$2,789	\$10,365
Csa Transf - Lift Stations 1 & 2	C	2003	26	7	\$138,000	\$100,846	\$37,154	1.96	\$270,279	\$197,512	\$169,433
Csa Transf - Lift Station - Kmart	C	2003	38	19	\$89,680	\$44,840	\$44,840	1.96	\$175,642	\$87,821	\$130,802
Csa Transf - Lift Station - Walmart	C	2003	42	23	\$89,964	\$40,698	\$49,266	1.96	\$176,199	\$79,709	\$135,501
Csa Transf - Equalization Pond	C	2003	45	26	\$339,840	\$143,488	\$196,352	1.96	\$665,592	\$281,028	\$522,104
Pumping Plant - Aggregate Expenses	C	2003	12	0	\$984,517	\$984,517	\$0	1.96	\$1,928,221	\$1,928,221	\$943,704
Csa Transf - Pumps	C	2003	5	0	\$24,799	\$24,799	\$0	1.96	\$48,570	\$48,570	\$23,771
Amador Central Office Park	C	2008	7	0	\$728,429	\$728,429	\$0	1.60	\$1,166,777	\$1,166,777	\$438,348
Sewer Line Rehab-Airport & Hwy 49	C	2009	10	0	\$39,392	\$39,392	\$0	1.53	\$60,206	\$60,206	\$20,814
Ww-Spare Pump And Motor Redundancy	C	2009	5	0	\$16,088	\$16,088	\$0	1.53	\$24,588	\$24,588	\$8,500
Clean & Line Sewer Pipe - Hwy 49	C	2009	7	0	\$62,709	\$62,709	\$0	1.53	\$95,843	\$95,843	\$33,135
Sierra West Business Park Lot 1C Wastewater	C	2008	25	11	\$98	\$55	\$43	1.60	\$157	\$88	\$102
Martell Ww I & I Corrections	C	2007	25	10	\$433	\$260	\$173	1.65	\$715	\$429	\$455
Martell Plaza Lift Station	C	2007	25	10	\$1,483	\$890	\$593	1.65	\$2,449	\$1,469	\$1,559
Amador County Jail Mlx	C	2011	40	29	\$1,969	\$541	\$1,427	1.45	\$2,851	\$784	\$2,310
Sierra West Bus Park Lot 3	C	2015	40	33	\$1,941	\$340	\$1,601	1.31	\$2,535	\$444	\$2,195
CALSTAR WW MLX	C	2013	40	31	\$2,798	\$630	\$2,168	1.37	\$3,844	\$865	\$3,215
Csa Transf - 240 Lf 4"" Pvc Sewer Line	C	2003	38	19	\$4,800	\$2,400	\$2,400	1.96	\$9,401	\$4,701	\$7,001
Wicklow Way Subdivision	C	2009	25	12	\$5,561	\$2,892	\$2,669	1.53	\$8,499	\$4,420	\$5,608
Martell Plaza Lift Station	C	2007	25	10	\$6,641	\$3,985	\$2,656	1.65	\$10,967	\$6,580	\$6,982
Sewer Line Rehab-Airport Road	C	2011	40	29	\$8,010	\$2,203	\$5,807	1.45	\$11,600	\$3,190	\$9,397
Sierra Pacificblm/Ind Park Wastewater	C	2008	25	11	\$20,512	\$11,487	\$9,025	1.60	\$32,856	\$18,399	\$21,369
Csa Transf - 1180 Lf 6"" Pvc Sewer Lines	C	2003	41	22	\$35,400	\$16,405	\$18,995	1.96	\$69,332	\$32,130	\$52,928
Csa Transf - 1175Lf 6"" Sewer Line	C	2003	42	23	\$35,250	\$15,946	\$19,304	1.96	\$69,039	\$31,232	\$53,092
Csa Transf - 1091 Lf 6"" Pvc Sewer Line	C	2003	38	19	\$39,660	\$19,830	\$19,830	1.96	\$77,676	\$38,838	\$57,846
Csa Transf - 4500 Lf 6"" Pvc Sewer Line	C	2003	30	11	\$135,000	\$85,500	\$49,500	1.96	\$264,404	\$167,456	\$178,904
Treatment Plant Capacity Purchase	C	2006	40	24	\$261,824	\$104,730	\$157,094	1.70	\$445,798	\$178,319	\$341,068
Csa Transf - Sewer Lines	C	2003	26	7	\$672,540	\$491,472	\$181,068	1.96	\$1,317,200	\$962,569	\$825,728
Amador Ride Business Park (Ww Portion)	C	2007	25	10	\$519,200	\$311,520	\$207,680	1.65	\$857,409	\$514,445	\$545,889
Amador Central Office Park	C	2008	25	11	\$697,805	\$390,771	\$307,034	1.60	\$1,117,725	\$625,926	\$726,954
Sierra West Business Park Ww Mlx	C	2009	40	27	\$1,989,008	\$646,428	\$1,342,581	1.53	\$3,039,974	\$987,991	\$2,393,546
Lift Station Fencing	C	2010	20	8	\$7,210	\$4,326	\$2,884	1.49	\$10,736	\$6,442	\$6,410
Sutter Creek Plant Capacity Purchase (2000)	T	2000	40	18	\$322,660	\$177,463	\$145,197	2.10	\$678,139	\$372,977	\$500,676
Sutter Creek Plant Capacity Purchase (2006)	T	2006	40	24	\$57,913	\$23,165	\$34,748	1.70	\$98,606	\$39,442	\$75,441
Sutter Creek Plant Capacity Purchase (2011)	T	2011	40	29	\$54,060	\$14,867	\$39,194	1.45	\$78,289	\$21,530	\$63,423
Subtotal Martell					\$7,404,216	\$4,515,939	\$2,888,277		\$12,834,514	\$7,993,729	\$8,318,576

Table A-1
Amador Water Agency Wastewater Financial Analysis 2022
List of Wastewater Assets

DRAFT

Description	Fee	Purchase	Remaining		Amount	Depreciated	Inflation	Replacement	Replacement	Replacement Cost	
	Portion	Year	Life	Life	Original Cost	Asset Value	Adj.	Cost	Cost less	less Orig. Depr.	
	[1]		years	years	Option 1	Option 2	[2]	Option 3	Option 4	Option 5	
LEACHFIELD DISPOSAL SYSTEMS											
Wildwood Pump	C	2001	40	19	\$7,312	\$3,839	\$3,473	2.08	\$15,173	\$7,966	\$11,334
Csa Transf	C	2003	57	38	\$76,285	\$25,428	\$50,857	1.96	\$149,408	\$49,803	\$123,979
Gayla Manor Direct Charge	C	2000	40	18	\$107	\$59	\$48	2.10	\$225	\$124	\$166
Ww Treatment Plant	T	1998	40	16	\$369	\$222	\$148	2.22	\$821	\$493	\$600
Treatment Plant	T	1998	40	16	\$400	\$240	\$160	2.22	\$890	\$534	\$650
Auto Dialer Install	T	2006	40	24	\$460	\$184	\$276	1.70	\$784	\$313	\$600
Treatment Plant	T	1997	40	15	\$2,573	\$1,608	\$965	2.24	\$5,756	\$3,598	\$4,148
Eagles Nest Mrp Installation	C	2004	40	22	\$2,541	\$1,144	\$1,398	1.84	\$4,686	\$2,109	\$3,543
Fairway Pines Unit Ii A	C	1998	40	16	\$228,493	\$137,096	\$91,397	2.22	\$508,169	\$304,902	\$371,073
Waste Water System	C	1992	40	10	\$595,946	\$446,960	\$148,987	2.64	\$1,571,114	\$1,178,336	\$1,124,155
Gayla Manor Wdr Implementation	T	2008	7	0	\$123,789	\$123,789	\$0	1.60	\$198,281	\$198,281	\$74,492
Wildwood Wdr Implementation	T	2005	40	23	\$12	\$5	\$7	1.77	\$21	\$9	\$16
Eagles Nest Upgrades	C	2001	40	19	\$97	\$51	\$46	2.08	\$201	\$106	\$150
Fairway Pines Lift Station Float	C	2004	40	22	\$90	\$41	\$50	1.84	\$167	\$75	\$126
Gayla Manor Lift Station Float	C	2004	40	22	\$125	\$56	\$69	1.84	\$230	\$103	\$174
Jackson Pines - Phase Ii	C	2001	40	19	\$194	\$102	\$92	2.08	\$403	\$212	\$301
Fairway Pines Ww	C	2006	40	24	\$171	\$69	\$103	1.70	\$292	\$117	\$223
Jackson Pines Phase Iii	C	2004	40	22	\$220	\$99	\$121	1.84	\$406	\$183	\$307
Wildwood Pump	C	2001	40	19	\$256	\$134	\$122	2.08	\$531	\$279	\$397
Jackson Pines Phase Iii	C	2006	40	24	\$367	\$147	\$220	1.70	\$625	\$250	\$478
Jackson Pines Lift Station Screens	C	2007	25	10	\$1,063	\$638	\$425	1.65	\$1,755	\$1,053	\$1,117
Pine Grove Elementary Ww Connection	C	2006	40	24	\$884	\$354	\$531	1.70	\$1,506	\$602	\$1,152
Contributed Capital Projects	C	1998	40	16	\$3,428	\$2,057	\$1,371	2.22	\$7,624	\$4,575	\$5,567
Gayla Manor Leachfield Construction	C	2013	40	31	\$1,975	\$444	\$1,531	1.37	\$2,714	\$611	\$2,270
Mace Meadow Tie-In	C	2007	25	10	\$3,962	\$2,377	\$1,585	1.65	\$6,543	\$3,926	\$4,165
Viewpoint Wastewater Mlx	C	2001	40	19	\$3,768	\$1,978	\$1,790	2.08	\$7,820	\$4,105	\$5,841
Fairway Pines Mlx	C	2001	40	19	\$4,213	\$2,212	\$2,001	2.08	\$8,743	\$4,590	\$6,531
The Pines At Mace Meadow	C	2009	40	27	\$3,338	\$1,085	\$2,253	1.53	\$5,101	\$1,658	\$4,016
Pine Acres North WW	C	2014	40	32	\$2,892	\$578	\$2,314	1.34	\$3,869	\$774	\$3,291
Transmission & Distribution	C	1997	40	15	\$6,223	\$3,889	\$2,334	2.24	\$13,923	\$8,702	\$10,033
Pine Grove Ww Service Relocate	C	2006	40	24	\$4,382	\$1,753	\$2,629	1.70	\$7,461	\$2,984	\$5,708
Pine Grove Town Hall	C	2013	40	31	\$3,525	\$793	\$2,732	1.37	\$4,844	\$1,090	\$4,051
Fairway Pines Ii B&C Mlx	C	2006	40	24	\$4,815	\$1,926	\$2,889	1.70	\$8,198	\$3,279	\$6,272
Fairway Pines Ii D Mlx	C	2006	40	24	\$5,961	\$2,384	\$3,576	1.70	\$10,149	\$4,060	\$7,765
Jackson Pines Lot 40 Relocate	C	2007	25	10	\$8,827	\$5,296	\$3,531	1.65	\$14,577	\$8,746	\$9,281
Surrey Junction Lot 53 Mlx	C	2007	25	10	\$8,844	\$5,307	\$3,538	1.65	\$14,605	\$8,763	\$9,299
Fairway Pines Ii D Mlx	C	2001	40	19	\$8,035	\$4,219	\$3,817	2.08	\$16,674	\$8,754	\$12,456
Gayla Manor Filter And Pumps	T	2006	40	24	\$8,539	\$3,416	\$5,123	1.70	\$14,539	\$5,815	\$11,123
Gayla Manor Wdr Implement	T	2010	40	28	\$8,365	\$2,509	\$5,855	1.49	\$12,455	\$3,737	\$9,946
Fairway Pines Force Main	C	2006	40	24	\$10,272	\$4,109	\$6,163	1.70	\$17,489	\$6,996	\$13,381
Transmission And Distribution	C	2003	40	21	\$12,052	\$5,725	\$6,327	1.96	\$23,604	\$11,212	\$17,879
Fairway Pines Unit 1 Ww	C	2009	40	27	\$12,911	\$4,196	\$8,715	1.53	\$19,734	\$6,413	\$15,537
FEMA Buckhorn Pump Repl.	C	2019	15	12	\$11,709	\$2,342	\$9,367	1.16	\$13,623	\$2,725	\$11,282
Gayla Manor Spritzer Barge	T	2004	40	22	\$20,163	\$9,073	\$11,089	1.84	\$37,184	\$16,733	\$28,111
Gayla Manor Imp Design/Construction	T	2010	40	28	\$17,362	\$5,209	\$12,153	1.49	\$25,852	\$7,755	\$20,643
Pressure Dosed Leach Fields	T	2007	25	10	\$35,950	\$21,570	\$14,380	1.65	\$59,367	\$35,620	\$37,798
Fairway Pines Wdr Implement	T	2007	25	10	\$44,842	\$26,905	\$17,937	1.65	\$74,052	\$44,431	\$47,147
Wildwood Wdr Implementation	T	2004	40	22	\$34,788	\$15,655	\$19,134	1.84	\$64,157	\$28,871	\$48,502
Fairway Pines/M Meadows	C	2014	40	32	\$25,195	\$5,039	\$20,156	1.34	\$33,706	\$6,741	\$28,667
Marcellus Wastewater Mlx	C	2007	25	10	\$58,726	\$35,236	\$23,491	1.65	\$96,981	\$58,189	\$61,745
Gayla WW Orenco PODS	T	2019	40	37	\$37,401	\$2,805	\$34,596	1.16	\$43,515	\$3,264	\$40,710
Pg Comm Leachfield Expansion	T	2011	40	29	\$62,801	\$17,270	\$45,531	1.45	\$90,948	\$25,011	\$73,678
Pine Grove Ww Wdr Implement	T	2007	25	10	\$121,410	\$72,846	\$48,564	1.65	\$200,497	\$120,298	\$127,651
Mace Meadow Tie-In - Contributed Capital	C	2005	40	23	\$103,435	\$43,960	\$59,475	1.77	\$182,885	\$77,726	\$138,925
Contributed Capital	C	1997	40	15	\$262,000	\$163,750	\$98,250	2.24	\$586,169	\$366,356	\$422,419
Manhole Replacement Ridge Rd	C	2020	50	48	\$141,893	\$5,676	\$136,218	1.15	\$162,670	\$6,507	\$156,994
Gayla Manor Leachfield	T	2010	40	28	\$327,840	\$98,352	\$229,488	1.49	\$488,148	\$146,444	\$389,796
Mace Meadow Tie-In	C	2006	40	24	\$391,801	\$156,721	\$235,081	1.70	\$667,106	\$266,842	\$510,385
General Plant	T	1996	20	0	\$9,931	\$9,931	\$0	2.34	\$23,263	\$23,263	\$13,332
General Plant	T	1993	40	11	\$2,741	\$1,987	\$754	2.49	\$6,832	\$4,953	\$4,845
Wastewater Development	T	1998	40	16	\$52,299	\$31,380	\$20,920	2.22	\$116,314	\$69,788	\$84,934
Generators WW LS A&B	C	2020	20	18	\$50,443	\$5,044	\$45,399	1.15	\$57,829	\$5,783	\$52,785
Jetter	C	2020	17	15	\$60,286	\$7,092	\$53,194	1.15	\$69,113	\$8,131	\$62,021
Pine Grove Ww Facility	T	2001	40	19	\$2,000,718	\$1,050,377	\$950,341	2.08	\$4,151,696	\$2,179,640	\$3,101,319
Subtotal Leachfield Disposal Systems					\$5,041,819	\$2,586,735	\$2,455,084		\$9,934,018	\$5,355,306	\$7,347,282
Total Wastewater Assets					\$16,744,656	\$9,962,185	\$6,782,471		\$30,872,217	\$18,746,177	\$20,910,032
Collection					\$13,239,618	\$8,218,994	\$5,020,624		\$24,212,649	\$15,348,923	\$15,993,655
Treatment and Disposal					\$3,505,038	\$1,743,192	\$1,761,847		\$6,659,568	\$3,397,254	\$4,916,377

Source: Amador Water Agency, the Engineering News-Record Construction Cost Index, and HEC April 2022.

assets

[1] Collection facility = C; Treatment/Disposal facility = T.

[2] Uses the ENR CCI historical values from June 1992 to June 2022.

Table A-2
Amador Water Agency Wastewater Financial Analysis 2022

Cash Reserves Added to the Capacity Fee

DRAFT

Item		Amount
Total Wastewater Fund Cash		
Cash in the Wastewater Fund (6/30/2021)	a	\$747,896
Water Fund Repayment of Wastewater Loan (FY2022) [1]	b	\$500,000
Total Wastewater Fund Cash	c = a+b	\$1,247,896
Capacity Fees		
Capacity Fee Cash (6/30/2021)	d	\$641,511
Water Fund Repayment of Wastewater Loan (FY2022) [1]	e	\$500,000
Total Capacity Fees Cash	f = d+e	\$1,141,511
Cash Reserves Included in Fee Calculation	g = c-f	\$106,385

Sources: AWA and HEC, April 2022.

cash

[1] Loan of wastewater capacity fees to the water fund.

Table A-3
Amador Water Agency Wastewater Financial Analysis 2022
Listing of Homes for Sale (Built since 2000)

DRAFT

Amador County	Building Square Feet	Calaveras County	Building Square Feet
Ione	1,652	Valley Springs	2,129
Plymouth	1,386	San Andreas	1,900
Pine Grove	1,900	Valley Springs	1,956
Ione	1,680	Murphys	2,343
Pine Grove	1,836	Copperopolis	2,402
Jackson	1,902	Arnold	1,948
Pioneer	2,256	Wilseyville	1,094
Ione	1,803	Copperopolis	2,050
Sutter Creek	2,546	Arnold	1,816
Ione	1,915	Murphys	2,904
Jackson	2,576	Murphys	3,034
Plymouth	2,302	Copperopolis	1,468
Sutter Creek	2,089	Valley Springs	2,622
Pioneer	2,566	Copperopolis	2,860
Ione	3,818	Angels Camp	1,448
Sutter Creek	2,528	San Andreas	600
Pioneer	2,022	Valley Springs	2,542
Volcano	5,361	Angels Camp	2,892
Pioneer	2,022	Copperopolis	1,404
Sutter Creek	4,458	Wallace	3,980
Pioneer	3,131	Arnold	2,912
Plymouth	9,912	Copperopolis	2,280
Plymouth	2,286	Copperopolis	4,497
Volcano	2,711	Valley Springs	3,185
Median	2,271	Copperopolis	4,107
		Angels Camp	3,360
		Copperopolis	4,057
		Copperopolis	1,704
		Angels Camp	6,235
		Mokelumne Hill	2,081
		Copperopolis	1,442
		Copperopolis	3,161
		Valley Springs	2,016
		Valley Springs	2,979
		San Andreas	1,340
		Copperopolis	1,600
		Valley Springs	2,403
		Valley Springs	3,004
		Median	2,373
Both Counties			
Median	2,294	Copperopolis	1,442
Median of Houses built in the last 10 Yrs	2,101	Copperopolis	3,161
		Valley Springs	2,016
		Valley Springs	2,979
		San Andreas	1,340
		Copperopolis	1,600
		Valley Springs	2,403
		Valley Springs	3,004
		Median	2,373