

COTTONWOOD IMPROVEMENT DISTRICT

RESOLUTION 2025-001

A RESOLUTION AMENDING IMPACT FEES WITHIN THE SERVICE AREA OF THE COTTONWOOD IMPROVEMENT DISTRICT FOR THE COLLECTION, TREATMENT AND DISPOSAL OF WASTEWATER

WHEREAS, the Cottonwood Improvement District (the “District”) is a special district authorized and organized under the laws of the State of Utah to construct, own and operate facilities for the collection and treatment of wastewater; and

WHEREAS, the District is authorized pursuant to the Impact Fees Act, Utah Code Ann. § 11-36-101 et seq. to adopt and impose impact fees as a condition of development approval; and

WHEREAS, previously the District has caused an Impact Fee Facilities Plan (the “IFFP”) and an Impact Fee Analysis (the “IFA”) to be prepared, which were adopted on February 16, 2022 when the District adopted resolution 2022-01, AMENDING IMPACT FEES WITHIN THE SERVICE AREA OF THE COTTONWOOD IMPROVEMENT DISTRICT FOR THE COLLECTION, TREATMENT AND DISPOSAL OF WASTEWATER, PROVIDING FOR THE CALCULATION AND COLLECTION OF IMPACT FEES, AND DEFINING APPEAL PROCEDURES FOR CONTESTED IMPACT FEES

WHEREAS, since the adoption of resolution 2022-01, the District has received bid prices and updated cost estimates for projects within the planning window that are substantially higher than what was planned for in the 2022 IFFP and IFA.

WHEREAS, Ongoing inflation continues to have an impact on the cost of maintaining infrastructure and providing capacity for future growth.

WHEREAS, the District retained Bowne Collins & Associates (BC&A) to update the IFFP and IFA to reflect these changes in costs.

WHEREAS, BC&A has produced a technical memorandum dated November 18, 2024, the titled “Amendment to IFFP and IFA 2024” (the “Technical Memorandum”) with proposed updates to the IFFP and IFA based on the changes in costs, a copy of which is attached hereto as **Exhibit A**.

NOW THEREFORE, the Board of Trustees of the Cottonwood Improvement District hereby resolves to adopt this Resolution amending impact fees as follows:

1. Table ES-5 and Table 8 of the IFFP are deleted and replaced with the table in the Technical Memorandum titled “Project Costs Allocated to Projected Development, 10 Year Planning Horizon”. All other components of the IFFP remain unchanged.
2. Tables ES-1, ES-2, 4, 6, 7, and 8 of the IFA are deleted and replaced with the tables of the same name in the Technical Memorandum. All other components of the plan remain unchanged.
3. The following impact fee amounts, which do not exceed amounts determined in the Technical Memorandum, to be effective on and after **April 15, 2024**:

	2024	2025	2026	2027	2028	2029
Total overall Fee	\$3,645.00	\$3,674.00	\$3,703.00	\$3,734.00	\$3,765.00	\$3,797.00

Dated this 15th day of January, 2025

Cottonwood Improvement District

ATTEST:

James Durrant, Chair of Board of Trustees

Clerk

EXHIBIT A

TECHNICAL MEMORANDUM

AMENDMENT TO IFFP and IFA 2024

TO: Greg Neff, P.E., Cottonwood Improvement District

COPIES: Spencer Evans, CID

FROM: Keith Larson, P.E. & Wyatt Andersen, P.E.
Bowen, Collins & Associates
154 East 14075 South
Draper, Utah 84020

DATE: November 18, 2024

INTRODUCTION

Cottonwood Improvement District (CID or District) retained Bowen Collins & Associates (BC&A) to prepare a Capital Facilities Plan (CFP), Impact Fee Facilities Plan (IFFP), and Impact Fee Analysis (IFA). These plans were completed in 2022 and adopted by the District.

Since 2022, the District has received bid prices and updated cost estimates for projects within the planning window that are substantially higher than what was planned for in the 2022 CFP. Ongoing inflation continues to have an impact on the cost of maintaining infrastructure and providing capacity for future growth. The purpose of this memorandum is to amend the IFFP and IFA to reflect these changes in costs.

PLAN CHANGES

There are two notable changes that need to be made in the adopted Impact Fee Facilities Plan and Impact Fee Analysis:

1. **Updates to Projects in Design Phase or in Construction Phase** – There are projects that are currently in the design phase or in the bidding/construction phase that have had updated cost estimates or bid tabulations provided to the District. These projects include the following:
 - a. **Project #4** – Bids for the first phase of this project were received in June of 2024 and a total cost estimate for both phases of the project was updated by BC&A and provided to the District.
 - b. **Project #5** – During preliminary design of this project, survey of the rims and inverts of manholes along this project alignment provided updated information to calculate capacity in the system. Based on the updated capacity calculations, it was determined that there are no deficiencies in either the existing conditions hydraulic model or the buildout conditions hydraulic model. Correspondingly Project #5 has been removed from the IFFP and IFA tables in this analysis.

- c. **CVWRF Improvement Funding** – As part of construction of improvements at the treatment plant, Central Valley Water Reclamation Facility has needed to take out additional financing since the last IFA was completed. The additional interest costs associated with this new bonding has been added to the documents and the user fee credit has also been correspondingly updated.

For each of these projects, the costs originally identified in the IFFP have been replaced with updated values from the actual construction bids or more detailed cost estimates.

2. **Update of Project Cost Estimates to Reflect Observed Inflation** – For projects that are in the planning window and are not in the design phase or construction phase yet, the cost estimates included in the plan have been updated to account for additional inflation based on observed increases in cost for other projects.

Outside of the changes noted above, the foundational components of the CFP, IFFP, and IFA remain unchanged. This means that:

- The planning window for the analysis does not change, so 2022 is still considered “existing conditions” for this amendment.
- Long-term growth projections were not reevaluated for this update. Thus, projections do not change for existing, 10-year, or buildout conditions.
- Since growth projections were not reevaluated, wastewater flow projections used in the sewer models also remain unchanged.

AMENDMENT TO PLAN

The identified changes only modify two tables in the Impact Fee Facilities Plan. This amendment deletes Table ES-5 and Table 8 of the IFFP and replaces them with the following table titled “Project Costs Allocated to Projected Development, 10 Year Planning Horizon”. All other components of the plan remain unchanged.

The identified changes modify multiple tables in the Impact Fee Analysis. This amendment deletes Tables ES-1, ES-2, 4, 6, 7, and 8 of the IFA and replaces them with the following tables. All other components of the plan remain unchanged.

Table ES-5 and Table 8
Project Costs Allocated to Projected Development, 10-Year Planning Horizon

ID	Project	Total Project Cost	Percent to Existing	Percent to 10 Year Growth	Percent to Growth 2029 through Buildout	Cost to Existing	Cost 10 Year Growth	Cost to Growth 2029 through Buildout
	Collection System Projects							
2	Camino Real Drive Upsize	\$975,656	4.60%	64.88%	30.51%	\$44,907	\$633,035	\$297,714
4	I-215 900 East Upsize	\$11,112,996	87.06%	4.73%	8.21%	\$9,674,963	\$525,909	\$912,124
7	BCC Road Upsize	\$1,225,116	1.51%	10.59%	87.90%	\$18,530	\$129,712	\$1,076,874
8	Union Park Ave 7400 South Upsize	\$675,730	27.01%	24.14%	48.85%	\$182,540	\$163,108	\$330,082
9	7800 South 1200 East Upsize	\$4,142,342	27.01%	24.25%	48.73%	\$1,119,002	\$1,004,621	\$2,018,719
10	Robidoux Road 2700 East Upsize	\$153,405	10.66%	39.35%	49.99%	\$16,351	\$60,369	\$76,685
11	Little Cottonwood Road Wasatch Blvd Upsize	\$3,135,287	16.20%	29.13%	54.67%	\$507,863	\$913,209	\$1,714,215
	Subtotal	\$21,420,532				\$11,564,156	\$3,429,963	\$6,426,413
	Treatment Plant Projects							
1	CVWRF Improvements	\$72,337,531	61.52%	7.03%	31.44%	\$44,504,306	\$5,087,624	\$22,745,600
	Subtotal	\$72,337,531				\$44,504,306	\$5,087,624	\$22,745,600
	Total	\$93,758,063				\$56,068,462	\$8,517,588	\$29,172,013

Table ES-1 and Table 6
Impact Fee Calculation per ERU – Cottonwood Improvement District Service Area

System Components	Total Cost of Component	% Serving 10-year Growth	Cost Serving 10-year Growth	10-year ERUs Served	Cost Per ERU
General Assets					
Existing Facilities – General Assets	\$5,192,292	9.1%	\$474,575	4,306	\$110.21
Collection Facilities					
Existing Facilities	\$45,428,548	7.0%	\$3,198,170	4,306	\$742.72
Existing Facility Interest Costs	\$0	7.0%	\$0	4,306	\$0.00
10-year Projects	\$21,420,532	16.0%	\$3,429,963	4,306	\$796.55
10-Year Project Interest Costs	\$0	16.0%	\$0	4,306	\$0.00
Credit for User Fees Paid Toward Existing					\$0.00
Subtotal	\$66,849,080		\$6,628,133		\$1,539.28
Treatment Plant					
Existing Facilities	\$32,083,824	7.0%	\$2,256,512	4,306	\$524.04
Existing Facility Interest Costs	\$0	7.0%	\$0	4,306	\$0.00
10-year Projects	\$72,337,531	7.0%	\$5,087,624	4,306	\$1,181.52
10-Year Project Interest Costs	\$60,746,550	7.0%	\$4,272,410	4,306	\$992.20
Credit for User Fees Paid Toward Existing					(-\$729.93)
Subtotal	\$165,167,904		\$11,616,547		\$1,967.83
Studies					
All Studies	\$85,476	69.90%	\$59,752	2,153	\$27.75
TOTAL	\$237,294,752		\$18,779,007		\$3,645.07

Table ES-2 and Table 8
Recommended Per ERU Impact Fee - Cottonwood Improvement District
Service Area

Maximum Allowable Impact Fee (Per ERU, by year)						
	2024	2025	2026	2027	2028	2029
Base Impact Fee (includes study costs)	\$4,375.00	\$4,375.00	\$4,375.00	\$4,375.00	\$4,375.00	\$4,375.00
User Fee Credit	\$729.93	\$700.88	\$671.21	\$640.86	\$609.76	\$577.91
Total Overall Fee	\$3,645.07	\$3,674.12	\$3,703.79	\$3,734.15	\$3,765.24	\$3,797.10

Table 4
Impact Fee Eligible Capital Projects

Project ID	Project	Total Project Cost	Percent to 10-Year Growth	Cost to 10-Year Growth
Collection System Projects				
2	Camino Real Drive Upsize	\$975,656	64.88%	\$633,035
4	I-215 900 East Upsize	\$11,112,996	4.73%	\$525,909
7	BCC Road Upsize	\$1,225,116	10.59%	\$129,712
8	Union Park Ave 7400 South Upsize	\$675,730	24.14%	\$163,108
9	7800 South 1200 East Upsize	\$4,142,342	24.25%	\$1,004,621
10	Robidoux Road 2700 East Upsize	\$153,405	39.35%	\$60,369
11	Little Cottonwood Road Wasatch Blvd Upsize	\$3,135,287	29.13%	\$913,209
	Subtotal	\$21,420,532		\$3,429,963
Treatment Plant Projects				
1	CVWRF Improvements	\$72,337,531	7.03%	\$5,087,624
	Subtotal	\$72,337,531		\$5,087,624
	Total	\$93,758,063		\$8,517,588

Table 7
Credit for User Fees Paid Toward Existing – Cottonwood Improvement District Treatment

Year	CID ERUs	Existing Capacity Portion of Loans Paid Through User Fees	Cost Per ERU	Present Value Cost Per ERU
2024	39,389	\$2,332,836	\$59.22	\$59.22
2025	39,820	\$2,332,444	\$58.57	\$56.05
2026	40,251	\$2,332,713	\$57.95	\$53.07
2027	40,681	\$2,333,127	\$57.35	\$50.26
2028	41,112	\$2,332,710	\$56.74	\$47.58
2029	41,542	\$2,333,220	\$56.16	\$45.07
2030	41,973	\$2,332,729	\$55.58	\$42.68
2031	42,231	\$2,332,419	\$55.23	\$40.58
2032	42,489	\$2,332,082	\$54.89	\$38.60
2033	42,747	\$2,332,731	\$54.57	\$36.72
2034	43,006	\$2,332,437	\$54.24	\$34.92
2035	43,264	\$2,332,512	\$53.91	\$33.22
2036	43,522	\$2,332,438	\$53.59	\$31.60
2037	43,780	\$2,332,665	\$53.28	\$30.07
2038	44,038	\$2,014,061	\$45.73	\$24.70
2039	44,296	\$2,007,985	\$45.33	\$23.42
2040	44,555	\$1,651,416	\$37.07	\$18.33
2041	44,813	\$1,651,495	\$36.85	\$17.44
2042	45,071	\$1,323,719	\$29.37	\$13.30
2043	45,329	\$1,094,527	\$24.15	\$10.46
2044	45,587	\$669,139	\$14.68	\$6.09
2045	45,845	\$669,271	\$14.60	\$5.79
2046	46,103	\$669,254	\$14.52	\$5.51
2047	46,362	\$669,460	\$14.44	\$5.25
Total User Fee Credit				\$729.93

A technical memorandum written by BC&A regarding the CVWRF bonds in these calculations is in the appendix of this technical memorandum.

IMPACT FEE CERTIFICATION - Utah Code Annotated 11-36a-306(1)

This IFFP Amendment has been prepared in accordance with Utah Code Annotated Title 11, Chapter 36a (the "Impact Fees Act"), which prescribes the laws pertaining to the imposition of impact fees in Utah. The accuracy of this IFFP Amendment relies in part upon planning, engineering, and other source data, provided by the District and its designees.

In accordance with Utah Code Annotated, 11-36a-306(1), Bowen Collins & Associates makes the following certification:

I certify that the attached impact fee facilities plan amendment:

1. Includes only the costs of public facilities that are:
 - a. allowed under the Impact Fees Act; and
 - b. actually incurred; or
 - c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. Does not include:
 - a. costs of operation and maintenance of public facilities;
 - b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents; or
 - c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement; and
3. Complies in each and every relevant respect with the Impact Fees Act.

Impact Fee Certification - 11-36A-306(2)

This report has been prepared in accordance with Utah Code Title 11, Chapter 36a (the "Impact Fees Act"), which prescribes the laws pertaining to the imposition of impact fees in Utah. The accuracy of this IFFP relies in part upon planning, engineering, and other source data, provided by the District and its designees.

In accordance with Utah Code Annotated, 11-36a-306(2), Bowen Collins & Associates makes the following certification:

I certify that the attached impact fee analysis:

1. Includes only the costs of public facilities that are:
 - a. allowed under the Impact Fees Act; and
 - b. actually incurred; or
 - c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. Does not include:

- a. costs of operation and maintenance of public facilities;
 - b. costs of qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents; or
 - c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement; and
3. Complies in each and every relevant respect with the Impact Fees Act.



Keith Larson, P.E.

APPENDIX



TECHNICAL MEMORANDUM

TO: Greg Neff, P.E., Cottonwood Improvement District
COPIES: File
FROM: Keith Larson, P.E. & Wyatt Andersen, P.E.
DATE: November 18, 2024
SUBJECT: Analysis of CVWRF for Impact Fee Calculations

CENTRAL VALLEY WATER RECLAMATION FACILITY

INTRODUCTION

Central Valley Water Reclamation Facility (CVWRF) (Facility) currently has a contractual agreement with 7 entities which are: Cottonwood Improvement District (CID), Granger-Hunter Improvement District (GHID), Kearns Improvement District (KID), Mt. Olympus Improvement District (MOID), Murray City, South Salt Lake City, and Taylorsville-Bennion Improvement District (TBID). While the CVWRF does not charge its own impact fee, all of its member agencies do charge impact fees for the portion of capacity they own at the Facility. The purpose of this memorandum is to document information regarding CVWRF that is common to the member agencies for the purpose of allowing any individual member agency to prepare an impact fee facilities plan and/or perform an impact fee analysis.

2024 UPDATE

This memorandum was originally written in October of 2020, but has been updated to reflect updated construction costs. Thus, references to growth still use 2020 as the basis for “existing” conditions, but all costs are now representative of expected 2024 dollars. This update was prepared at the request of TBID for the purposes of amending their impact fee analysis.

CVWRF GROWTH AND CAPACITY

As detailed in the State of Utah’s Impact Fee Act, an impact fee is generally calculated by identifying the available existing and future capacity in a facility and then dividing the value of that capacity by the amount of new growth that will benefit from the unused capacity. The purpose of this section is to identify both projected growth and available capacity at the Facility.

Projected Growth

CVWRF’s average annual flows have slightly increased over the past few years, and are expected to continue increasing as its member agencies experience more growth. Recent flow data shows that CVWRF’s peak month average day flow was as high as 65.66 million gallons per day (mgd) in April of 2019. Using this value and assuming a slight increase due to recent growth since 2019, the current maximum month flow (MMF) for the plant has been estimated as 66 mgd. To project future flows, CVWRF recently completed a Facility Plan which examines expected growth in its member agencies.

Projected growth identified in the facility plan identifies a future maximum month flow rate of 83.9 mgd, expected to around the year 2045. If it is assumed that growth will be roughly linear for this period, flows for the years of interest to this memorandum can be projected as summarized in Table 1. These projected flows are used as the basis for wasteload allocations associated with CVWRF's planned expansion.

Table 1: Existing and Projected CVWRF Capacity

Year	MMF (mgd)
2020	66
2030	73.2
2045	83.9

Available Capacity

It is reported in the Facility Plan that CVWRF currently has a permitted process flow capacity of 75 mgd. As shown in Table 1, flows are projected to surpass the current capacity before the end of the 25-year design horizon. Thus, the Facility has multiple expansion and rehabilitation projects planned to expand its MMF capacity to roughly 84 mgd by the year 2045.

To fairly calculate an impact fee, it is necessary to determine the percentage of the both existing facilities and future improvements that will service future users. However, this is a very difficult task in the case of CVWRF because the vast majority of the future projects proposed at the plant have multiple purposes. These project include components that expand capacity, improve level of service (e.g. improve nutrient removal capabilities), and rehabilitate aging existing infrastructure. As a result, it is extremely difficult to break costs for any single project into that portion serving existing users vs. that portion serving growth.

To avoid conflict and potential legal challenges over how a particular project was allocated, this memorandum recommends a simpler approach. Instead of trying to evaluate each individual project, it is recommended the existing facility and its proposed improvements be considered as one comprehensive project to achieve a final level of service. If this approach is taken, the percent use of capacity can be simply calculated for both existing and future facilities as the percent of flow based on the Facility's planned MMF expansion value of 84 mgd. The calculated percentage allocations based on this approach are shown below in Table 2.

Table 2: Percent Use of Total Design Capacity

	Existing	10 yr	Beyond 10 yr
CVWRF Assets	78.6%	8.6%	12.9%

Admittedly, this is an under representation of the true costs of serving future growth. There is most assuredly some portion of capacity for existing users that can be satisfied less expensively in the existing plant facilities than it will cost to add capacity for new users. However, using the cost allocation approach recommended here will remove any claim future development may have that cost allocation at the Facility is inequitable.

EXISTING SYSTEM COST

In order to calculate an impact fee, it is necessary to document the existing Facility's actual cost in accordance with Utah Code. Actual costs of existing facilities that will serve new development may be incorporated into the impact fee (at the proportion used to service the growth).

A complete list of CVWRF's Capital Assets was used to carefully identify which projects are and are not eligible for the impact fee (for a detailed table, refer to Appendix B-1). Facilities that cannot be included in the calculation of the fee include:

- Facilities without excess capacity available to service future growth
- Facilities with a lifespan of less than ten years (e.g. maintenance, IT, and vehicles)
- Facilities that have been/will be replaced by future projects in the 10-year planning window
- Facilities not specifically used for providing wastewater treatment services (e.g. golf course improvements).

Any facilities falling into the categories above have been removed from calculation of the impact fee. The total documented system value is shown in Table 3 along with the remaining total system value after removing non-eligible facilities.

Table 3: Existing CVWRF Value

Description	Value
Total Documented Value of CVWRF's Existing System	\$326,072,303
Total Value of Non-Eligible Facilities and Facilities that have been/will be Replaced	\$120,725,284
Remaining Impact Fee Eligible Total	\$205,347,019

FUTURE SYSTEM IMPROVEMENTS

The cost of the Facility's future system improvements must also be determined in order to calculate an impact fee. The cost of CVWRF's future impact fee eligible improvements has been calculated using a recent update to the CVWRF Capital Improvement Plan (CIP) Summary (first published in 2020) which includes projects from the year 2020 to 2037 (for a detailed table, refer to Appendix B-2). Total project costs for the plan are approximately \$515 million as summarized in Table 4. In order for a project to classify as eligible, the following requirements were applied:

- The project is required to maintain (but not exceed) the proposed level of service in the system.
- The project is expected to be built within ten years.
- The project is for a facility meeting the requirements of the Impact Fee Act as described above. In the case of CVWRF, this meant excluding projects associated with the categories of "Rolling Stock", "IT Projects", "Lab Projects", or "Maintenance Projects" in CVWRF's CIP Summary, along with a few other projects in other categories.

The total, excluded, and qualifying cost of future projects at the Facility are summarized in Table 4.

Table 4: Future CVWRF Cost

Description	Cost
Total Cost of All Projects	\$515,571,226
Total Cost of Non-Eligible Projects	\$53,459,836
Remaining Impact Fee Eligible Total	\$462,111,390

BONDING AND INTEREST

CVWRF has bonded for financing over the years and plans to continue bonding for their upcoming projects. The Facility's seven existing bonds and one projected bond (2024) are shown in Table 5 along with the total principle and interest costs (for a detailed payment schedule see Appendix B-3).

Table 5: CVWRF Existing Bonds

Bond	Principle	Interest	Total
2017A Sewer Revenue Bonds	\$28,600,000	\$15,400,754	\$44,000,754
2017B Sewer Revenue Bonds	\$3,445,000	\$394,136	\$3,839,136
2019A Sewer Revenue Bonds	\$35,390,000	\$18,955,618	\$54,077,275
2020A State SRF Loan	\$65,100,000	\$12,387,451	\$77,487,451
2021A Sewer Revenue Bonds	\$25,000,000	\$5,274,750	\$30,274,750
2021B Sewer Revenue Bonds	\$23,720,000	\$8,809,771	\$32,529,771
2021C Sewer Revenue Bonds	\$127,105,000	\$82,775,279	\$209,880,279
2024 Sewer Revenue Bonds	\$60,000,000	\$36,291,105	\$96,291,105
Total	\$368,360,000	\$180,288,864	\$548,648,864

Member agencies are not required to participate in each bond. Therefore, a specific bond may or may not apply when calculating interest costs for an impact fee.

IMPACT FEE IMPLICATIONS

Typically impact fee calculations are defined in terms of equivalent residential units (ERUs). However, since CVWRF provides service to multiple member agencies, each individual agency could have a varying definition of an ERU. Consequently, impact fee eligible costs in this memo will be defined in terms of gallons per day (gpd), instead of ERUs. This will then allow each individual agency to calculate their applicable cost based on their own definition of an ERU and their own expected future growth.

Percentage and price allocations for CVWRF's existing assets and future improvements are shown in Table 6 along with the calculated impact fee eligible costs defined in terms of cost/gpd.

Table 6: CVWRF Percentage and Price Allocations

	Cost	Existing	10 yr	Beyond 10 yr	Existing	10 yr	Beyond 10 yr	10 yr Growth (gpd)	10-year \$/gpd
CVWRF Existing Assets	\$205,347,019	78.6%	8.6%	12.9%	\$161,344,087	\$17,601,173	\$26,401,760	7,200,000	\$2.44
CVWRF Future Projects	\$462,111,390	78.6%	8.6%	12.9%	\$363,087,521	\$39,609,548	\$59,414,322	7,200,000	\$5.50
Total	\$667,458,409				\$524,431,607	\$57,210,721	\$85,816,081		\$7.95

In addition to these capital costs, the member agencies may also incur interest costs associated with historical and future expected bonding. Because participation in bonding is unique for each agency, these costs will need to be calculated separately as part of individual impact fees. The same is true for the calculation of user fee credits for ongoing debt where appropriate.

While the amount of debt service to be paid by each entity can be calculated directly by looking at the payment schedule for each bond, the portion of this debt service applicable to each category is less straightforward. If all the costs at the Facility were being covered through bonding, the percentage for debt service would simply match the percentage for the Facility as a whole. However, this is not the case. In addition to bonding revenue, each entity is also contributing some portion of cash to fund the improvements. Any contributions made separate from the bonds need to be credited against existing users debt service obligation. Since each entity can make a separate decision on whether they want to pay cash or participate in each bond, the cost allocation will vary based on bond participation as well as the nature of growth and use of capacity for each entity. Because the percent allocation of debt service will need to be calculated for impact fees, Table 7 shows bond participation for each individual entity. (For a complete payment schedule of existing bonds refer to Appendix B-3).

Table 7: CVWRF Member Agency Bond Participation

Member Agency	2017A Sewer Revenue Bonds	2017B Sewer Revenue Bonds	2019A Sewer Revenue Bonds	2020A State SRF Loan	2021 A Bond	2021 B Bond	2021 C Bond	2024 Bond
CID	28.4026%		25.3272%	15.8060%	15.0605%	15.0605%	15.8059%	16.9514%
GHID	49.1222%		43.8034%	27.3363%	26.0471%	26.0471%	27.3364%	29.3174%
KID		100%	18.7591%	11.7070%	11.1549%	11.1549%	11.7070%	
Mt. Olympus				26.6445%	25.3879%	25.3879%	26.6445%	28.5755%
Murray	13.5809%		12.1103%	7.5577%	7.2013%	7.2013%	7.5577%	8.1055%
South Salt Lake	8.8943%				4.7162%	4.7162%		5.3083%
TBID				10.9485%	10.4321%	10.4321%	10.9485%	11.7419%

Appendix B-1
CVWRF Capital Assets

Table B-1.1: CVWRF Capital Assets

Description	Original Cost	Impact Fee Eligible	Impact Fee Portion
SLC SSD #1 Land/facility land	\$3,876,860	Yes	\$3,876,860
Richards - Moench Land	\$1,800,000	Yes	\$1,800,000
Rss Building 1 (East)	\$965,968	Yes	\$965,968
SECONDARY CLARIFIER #01 Arm	\$110,134	Yes	\$110,134
Preliminary and Final Site Work	\$1,222,226	No	0
Aeration Basin 4 (Solids Contact)	\$500,000	No	0
Digester 4	\$1,381,615	Yes	\$1,381,615
Trickling Filter 1	\$1,660,950	no	0
SECONDARY CLARIFIER #04 Drive	\$40,000	No	0
Fire Management System	\$436,283	No	0
SECONDARY CLARIFIER #01	\$1,190,113	Yes	\$1,190,113
Trickling Filter 3	\$2,002,542	No	0
Filtrate East	\$175,000	Yes	\$175,000
Lawns, Sprinklers and other improvements	\$1,963,353	No	0
Aeration Basin 3 (Solids Contact)	\$500,000	No	0
Storm Pipes	\$265,050	Yes	\$265,050
PRIMARY CLARIFIER #6 Arm	\$556,068	Yes	\$556,068
Digester 5	\$1,869,023	Yes	\$1,869,023
PRIMARY CLARIFIER #4	\$1,189,662	Yes	\$1,189,662
Maint. Building	\$5,239,407	No	0
PRIMARY CLARIFIER #3	\$1,189,662	Yes	\$1,189,662
Construction of 900 West Curb and Gutter Improvements	\$99,982	No	0
SECONDARY CLARIFIER #05 Arm	\$110,134	Yes	\$110,134
PRIMARY CLARIFIER #2	\$1,189,662	Yes	\$1,189,662
Engineering	\$3,992,589	No	0
Digester 3	\$1,381,615	Yes	\$1,381,615
Construction of 12-inch Water Line	\$41,767	No	0
SECONDARY CLARIFIER #01 Drive	\$40,000	No	0
Land Improvements	\$5,007,502	No	0
Pump Station (For Trickling Filters 1-3)	\$1,818,750	No	0
Digester Control Building (1-4)	\$1,381,615	No	0
SECONDARY CLARIFIER #02 Arm	\$110,134	Yes	\$110,134
Supply and Installation of Railroad Spur	\$153,536	No	0
PRIMARY CLARIFIER #6	\$1,189,662	Yes	\$1,189,662
Digester 1	\$1,381,615	Yes	\$1,381,615
PRIMARY CLARIFIER #2 Arm	\$556,068	Yes	\$556,068
Chlorine Contact Tank Aeration Blower	\$49,266	No	0
RSS PUMP #05	\$60,000	No	0

Aeration Basin 2 (Solids Contact)	\$500,000	No	0
RSS PUMP #07	\$60,000	No	0
Gravity Belt Thickener Building	\$1,823,174	No	0
3W Building	\$200,000	No	0
Dewatering Building	\$7,540,049	No	0
Pc 1B	\$1,868,817	No	0
"Electrical equipment"	\$3,950,530	No	0
Truck Barn	\$164,902	No	0
SECONDARY CLARIFIER #06	\$1,190,113	Yes	\$1,190,113
Road	\$56,355	Yes	\$56,355
Digester 2	\$1,381,615	Yes	\$1,381,615
Fencing	\$37,339	Yes	\$37,339
Digester Control Building (5-7)	\$1,869,023	No	0
SECONDARY CLARIFIER #07 Arm	\$110,134	Yes	\$110,134
Power Gen Building	\$9,580,522	No	0
Roughing Filters, Recirculation Pumps	\$2,136,266	No	0
PRIMARY CLARIFIER #1	\$1,189,662	Yes	\$1,189,662
Utility Hookups	\$53,653	Yes	\$53,653
SECONDARY CLARIFIER #05	\$1,190,113	Yes	\$1,190,113
RSS PUMP #06	\$60,000	No	0
SECONDARY CLARIFIER #06 Arm	\$110,134	Yes	\$110,134
SECONDARY CLARIFIER #03	\$1,190,113	Yes	\$1,190,113
Process Control and Instrumentation System	\$3,819,245	No	0
PRIMARY CLARIFIER #4 Arm	\$556,068	Yes	\$556,068
SECONDARY CLARIFIER #03 Arm	\$110,134	Yes	\$110,134
Trickling Filter 2	\$2,002,542	No	0
SECONDARY CLARIFIER #02 Drive	\$40,000	No	0
SECONDARY CLARIFIER #04	\$1,190,113	Yes	\$1,190,113
Filtrate West	\$175,000	Yes	\$175,000
SECONDARY CLARIFIER #08	\$1,190,113	Yes	\$1,190,113
PRIMARY CLARIFIER #1 Arm	\$556,068	Yes	\$556,068
RSS PUMP #04	\$60,000	No	0
West Entrance Road	\$363,882	No	0
PRIMARY CLARIFIER #3 Arm	\$556,068	Yes	\$556,068
SECONDARY CLARIFIER #07	\$1,190,113	Yes	\$1,190,113
Headworks Building	\$12,085,136	No	0
Landscaping/Irrigation	\$804,012	No	0
SECONDARY CLARIFIER #04 Arm	\$110,134	Yes	\$110,134
Admin Building	\$5,162,675	No	0
Aeration Basin 1 (Solids Contact)	\$500,000	No	0
PRIMARY CLARIFIER #5	\$1,189,662	Yes	\$1,189,662

SECONDARY CLARIFIER #02	\$1,190,113	Yes	\$1,190,113
SECONDARY CLARIFIER #06 Drive	\$40,000	No	0
PRIMARY CLARIFIER #5 Arm	\$556,068	Yes	\$556,068
RSS PUMP #08	\$60,000	No	0
RSS PUMP #01	\$60,000	No	0
Ricoh Aficio Mp 6001 Copier (Zues)	\$14,994	No	0
South Salt Lake Interceptor	\$2,303,166	Yes	\$2,303,166
AIR HANDLER UNIT - AHU05101 (F5151)	\$65,000	No	0
Ultrasonic Nebulizer	\$8,750	No	0
Granger-Hunter Interceptor	\$1,910,615	Yes	\$1,910,615
Murray/Cottonwood Interceptor	\$7,249,005	Yes	\$7,249,005
1988 Load King TRAILER LOWBOY	\$31,965	No	0
Won-Door Corp Land	\$116,559	Yes	\$116,559
Cromar Land	\$228,500	Yes	\$228,500
Berrett Land	\$60,604	Yes	\$60,604
Paulsen Land	\$204,000	Yes	\$204,000
Vitro Ditch	\$195,638	No	0
Grit Tank	\$65,293	No	0
Maintanance Storage (Boneyard Building)	\$98,999	No	0
BELT FILTER PRESS #4	\$350,000	No	0
BELT FILTER PRESS #5	\$350,000	No	0
Incubator	\$11,924	No	0
BELT FILTER PRESS #6	\$350,000	No	0
CHILLER - CENTRIFUGAL	\$300,000	No	0
1994 One Jet FLUSHER TRAILER	\$31,000	No	0
1972 Fruehauf TANKER	\$11,000	No	0
Sampler	\$7,401	No	0
Snowblower	\$7,999	No	0
CAD	\$7,268	No	0
Deere Disc	\$8,623	No	0
1995 International TRUCK BOOM	\$30,623	No	0
Sludge Bins	\$1,659,090	No	0
Post Areation	\$1,301,044	No	0
Jail Line	\$443,720	Yes	\$443,720
East Concrete Pad	\$538,745	Yes	\$538,745
Pump Station (For Trickling Filters 5-7)	\$1,500,000	no	0
Expansion Equip	\$6,967,016	No	0
Aeration Basin 6 (Solids Contact)	\$500,000	Yes	\$500,000
PRIMARY CLARIFIER #7 Arm	\$1,701,754	Yes	\$1,701,754
PRIMARY CLARIFIER #7	\$1,000,000	Yes	\$1,000,000
Muffin Monster	\$9,927	No	0

Trickling Filter 6	\$1,500,000	No	0
Expansion	\$13,372,806	Yes	\$13,372,806
Trickling Filter 5	\$1,500,000	No	0
Aeration Basin 5 (Solids Contact)	\$500,000	Yes	\$500,000
Trickling Filter 7	\$1,500,000	No	0
PRIMARY CLARIFIER #7 Drive	\$40,000	Yes	\$40,000
PRIMARY CLARIFIER #8	\$1,000,000	Yes	\$1,000,000
PRIMARY CLARIFIER #8 Arm	\$1,701,754	Yes	\$1,701,754
PRIMARY CLARIFIER #8 Drive	\$40,000	Yes	\$40,000
PRIMARY CLARIFIER #9	\$1,000,000	Yes	\$1,000,000
PRIMARY CLARIFIER #9 Arm	\$1,701,754	Yes	\$1,701,754
PRIMARY CLARIFIER #9 Drive	\$40,000	Yes	\$40,000
PRIMARY CLARIFIER #10	\$1,000,000	Yes	\$1,000,000
PRIMARY CLARIFIER #10 Arm	\$1,701,754	Yes	\$1,701,754
PRIMARY CLARIFIER #10 Drive	\$40,000	Yes	\$40,000
New Security Gates & Camera	\$230,133	No	0
1999 International DUMP TRUCK	\$99,925	No	0
LOADER - JOHN DEERE 624H	\$104,904	No	0
Digester 7	\$6,792,378	Yes	\$6,792,378
Land Improvements	\$3,008,336	No	0
Digester 6	\$6,792,378	Yes	\$6,792,378
Sand Filter	\$1,650,860	No	0
Egg Digester Equipment Building	\$1,509,417	Yes	\$1,509,417
2001 GMC SERVICE TRUCK (FAT ALICE)	\$58,028	No	0
Grit Container	\$15,075	No	0
Fence	\$153,580	No	0
Golf Building	\$497,471	No	0
Lab Autoclave	\$6,198	No	0
Lab Distillation	\$10,350	No	0
2002 J&J TRAILER	\$62,910	No	0
Tay-Ben Line Re-Route	\$359,845	Yes	\$359,845
Cedar Valley Property - Blaine McKinney	\$3,525,764	Yes	\$3,525,764
Cedar Valley Property - Marvin Carson	\$335,610	Yes	\$335,610
ENGINE GENERATOR #05 - AT	\$869,153	No	0
SECONDARY CLARIFIER #08 Drive	\$40,000	Yes	\$40,000
GENIE SCISSOR LIFT	\$13,642	No	0
SECONDARY CLARIFIER #09 Drive	\$40,000	Yes	\$40,000
DUMBWAITER	\$155,506	No	0
SECONDARY CLARIFIER #10 Drive	\$40,000	Yes	\$40,000
SECONDARY CLARIFIER #10	\$2,954,118	Yes	\$2,954,118
SECONDARY CLARIFIER #08 Arm	\$110,134	Yes	\$110,134

ELEVATOR	\$155,506	No	0
ENGINE GENERATOR #03 - AT	\$755,113	No	0
ENGINE GENERATOR #04 - AT	\$879,230	No	0
SECONDARY CLARIFIER #09 Arm	\$954,600	Yes	\$954,600
SECONDARY CLARIFIER #09	\$2,954,118	Yes	\$2,954,118
SECONDARY CLARIFIER #10 Arm	\$954,600	Yes	\$954,600
Lab-Discrte Analyzer	\$50,363	No	0
COMPOST COVER PLACEMENT MACHINE CPM1	\$154,000	No	0
Compost Covers (13)	\$60,000	No	0
Compost Covers (9)	\$60,000	No	0
Compost Covers (6)	\$60,000	No	0
Compost Covers (2)	\$60,000	No	0
Compost Covers (5)	\$60,000	No	0
Compost Covers (7)	\$60,000	No	0
Compost Covers (14)	\$60,000	No	0
Secondary Cat Engine	\$164,026	No	0
Compost Covers (11)	\$60,000	No	0
AIR HANDLER UNIT - AHU05104	\$145,184	No	0
2005 CASE BACKHOE 580 SUPUVM	\$235,000	No	0
JLG AERIAL LIFT PLATFORM Model 600A	\$54,000	No	0
Equipment Barn	\$160,882	Yes	\$160,882
Flask scrubber	\$6,000	No	0
Compost Covers (10)	\$60,000	No	0
Compost Covers (1)	\$60,000	No	0
Compost Covers (4)	\$60,000	No	0
Compost Covers (3)	\$60,000	No	0
Compost Covers (12)	\$60,000	No	0
Compost Covers (8)	\$60,000	No	0
AIR HANDLER UNIT - ACU05152	\$32,000	No	0
Rss Building 2 (West)	\$800,000	No	0
CHILLER - MULTI-STAGE	\$236,306	Yes	\$236,306
Siloxane System	\$242,163	No	0
Polymer Feed	\$66,419	No	0
KOMATSU LOADER Model WA500	\$200,000	No	0
Network Cable	\$92,505	No	0
2008 Peterbilt Tractor	\$0	No	0
Scarab Barn	\$150,000	Yes	\$150,000
PETERSON WOODCHIP GRINDER Model 4710B	\$507,609	No	0
Camera/Dvr system	\$66,160	No	0
GEHL SKIDSTEER MODEL 5240	\$25,076	No	0
TOYOTA ELECTRIC FORKLIFT MODEL ZFBCU30	\$32,000	No	0

GEHL SKIDSTEER #2 MODEL 5240	\$25,552	No	0
Sand Filter (UV)	\$114,800	Yes	\$114,800
2011 Peterbilt TRACTOR ROTOMIX	\$117,000	No	0
Rdndnt Modbus Network	\$93,553	No	0
Fence	\$121,427	Yes	\$121,427
MCCLOSKEY INTERNATIONAL TROMMEL MODEL 621RE	\$254,750	No	0
UV Structure	\$4,064,838	Yes	\$4,064,838
2010 Williamsen TRAILER PUP	\$42,807	No	0
2011 Ford F-150 PICKUP	\$25,312	No	0
ROTOCHOPPER MODEL GO-BAGGER 250 (COMPOST BAG MACHINE)	\$46,886	No	0
RYLIND ROLL-OUT BUCKET ONLY (KOMATSU LOADER MODEL WA500 BUCKET ATTACHMENT)	\$33,321	No	0
2011 Rotomix machine on Peterbilt Tractor	\$118,366	No	0
Dry Polymer Injection System	\$71,374	Yes	\$71,374
Tink - Roll Out Bucket	\$26,306	No	0
Snow plow and spreader	\$6,300	No	0
UV Equipment	\$2,196,533	Yes	\$2,196,533
SCARAB COMPOST TURNER MODEL 27X11	\$464,750	No	0
TARP WINDER	\$32,000	No	0
Compost Monitoring Equipment	\$41,116	No	0
Solids Contact Basin upgrades	\$157,600	Yes	\$157,600
PICKUP WAREHOUSE - 205688EX	\$26,631	No	0
New Cameras throughout plant	\$46,796	No	0
Int Rehab Granger Hunter	\$444,100	Yes	\$444,100
Modicon/Unity	\$95,432	No	0
Road - Compost Site	\$110,089	Yes	\$110,089
Storage Bldg	\$272,145	No	0
Tarp System	\$33,964	Yes	\$33,964
New Compost Camera System	\$27,602	No	0
Tarp system	\$33,964	No	0
2012 Toyota Tacoma	\$28,845	No	0
Millcreek Stabilization	\$77,290	Yes	\$77,290
2010 Peterbilt Tractor/Flatbed	\$0	No	0
LANDA PRESSURE WASHER - W/ TRAILER MODEL ST20	\$10,404	No	0
ICP & HG Analyzer	\$137,438	No	0
Digester Gas Dryer	\$104,783	Yes	\$104,783
Tarp Rack	\$30,623	Yes	\$30,623
Interceptor To Twin- Granger Hunter	\$1,348,887	Yes	\$1,348,887
GRAVITY BELT THICKENER #3	\$96,526	Yes	\$96,526
2014 Peterbilt TRACTOR	\$119,656	No	0
GRAVITY BELT THICKENER #2	\$96,526	Yes	\$96,526

Fire monitoring computer system	\$16,331	No	0
Service Air Dryer	\$30,747	Yes	\$30,747
GRAVITY BELT THICKENER #1	\$96,526	Yes	\$96,526
Backup UV Sand Filter	\$111,470	Yes	\$111,470
RSS East HVAC unit	\$14,900	Yes	\$14,900
Ion Chromatograph	\$69,098	Yes	\$69,098
AIR HANDLER UNIT - ACU05106	\$45,250	No	0
Capacitor protection system	\$50,027	No	0
Aeration Ponds	\$19,364	No	0
Video Management System	\$19,200	No	0
RSS East HVAC Unit Upgrades	\$27,680	No	0
2014 Toyota Tacoma	\$29,765	No	0
2014 Great Dane Box Trailer (40')	\$9,369	No	0
Interceptor South Of 3300 South	\$1,424,015	Yes	\$1,424,015
2016 DODGE RAM 2500 4X4	\$38,905	No	0
Replace GHID Siphon	\$1,657,565	Yes	\$1,657,565
Oil heater for barn	\$13,690	No	0
2016 GMC PICKUP	\$38,495	No	0
MMG Compressor	\$18,418	Yes	\$18,418
Compressed Air System	\$51,950	No	0
2016 International TRACTOR	\$116,692	No	0
2016 International TRACTOR	\$110,472	No	0
PI Tags	\$47,512	No	0
PI Archive - Coresight System	\$14,140	No	0
Vulcan Housing	\$14,330	No	0
Rotomix conveyor add-on	\$67,080	No	0
Server	\$19,476	No	0
Vehicle Gate Access-south gate	\$10,308	No	0
Sound system for board room	\$21,412	No	0
Roll Out Bucket for LOADER18 (John Deere)	\$27,855	No	0
Toyota electric Forklift model 8Fbcu32	\$37,069	No	0
2016 Spec Tec Trailer	\$83,600	No	0
2016 Spec Tec Trailer	\$87,250	No	0
2016 Cogen Construction	\$800,759	Yes	\$800,759
2016 Spec Tec Trailer	\$82,049	No	0
Secondary Clarifier Drive Rebuild #5	\$42,400	Yes	\$42,400
PRIMARY CLARIFIER #5 Drive - Complete Rebuild	\$42,535	Yes	\$42,535
Gas Chromatograph	\$132,575	Yes	\$132,575
GHID Siphon Structure And Meter Sulfide	\$238,756	Yes	\$238,756
Flow Stations New Radio Frequency Dial	\$84,046	No	0
2017 Toyota Tacoma	\$34,254	No	0

Refrigerated Centrifuge	\$10,137	Yes	\$10,137
2017 Toyota Tacoma	\$33,071	No	0
PRIMARY CLARIFIER #2 Drive - Complete Rebuild	\$41,673	Yes	\$41,673
PRIMARY CLARIFIER #1 Drive - Complete Rebuild	\$41,673	Yes	\$41,673
Secondary Clarifier Drive Rebuild #3	\$42,400	Yes	\$42,400
Cogen Replacement	\$607,025	Yes	\$607,025
Admin Building Access Control	\$51,528	No	0
RSS PUMP #02	\$59,330	Yes	\$59,330
Cyber Security Upgrades	\$62,962	No	0
VERMEER VACUUM TRAILER MODEL VX50-500	\$70,796	No	0
Wireless Network Upgrade	\$20,339	No	0
Backup Servers	\$15,670	No	0
2017 Cogen Construction	\$5,438,213	Yes	\$5,438,213
Secondary Clarifier Drive #6 Rebuild	\$44,285	No	0
2017 Odor Control Design	\$63,748	Yes	\$63,748
2017 Engine Replacement	\$181,261	Yes	\$181,261
2017 Nutrient Removal	\$1,061,987	Yes	\$1,061,987
2017 Digester Gas Piping System	\$185,372	Yes	\$185,372
2017 Secondary Clarifiers 11 & 12	\$165,676	Yes	\$165,676
Master Control Conduit Bucket	\$41,937	Yes	\$41,937
PRIMARY CLARIFIER #4 Drive - Complete Rebuild	\$41,310	Yes	\$41,310
PRIMARY CLARIFIER #3 Drive - Complete Rebuild	\$53,215	Yes	\$53,215
Secondary Clarifier Drive Rebuild #7	\$42,400	Yes	\$42,400
Cottonwood/Murray Slip Lining Project	\$5,406	Yes	\$5,406
Cottonwood/Murray Slip Lining Project	\$1,807,339	Yes	\$1,807,339
JOHN DEERE WHEEL LOADER MODEL 844K-III	\$440,000	No	0
AIR HANDLER UNIT - ACU05150	\$52,508	No	0
Spitfire Dying Machine	\$16,150	No	0
West Gate and Camera system	\$10,303	No	0
SST Cabinet - Headworks	\$28,000	Yes	\$28,000
2018 Chevrolet 2500 HD 4x4 truck	\$37,112	No	0
Absorption Chiller	\$35,760	Yes	\$35,760
Absorption Chiller	\$35,760	Yes	\$35,760
Absorption Chiller	\$35,760	Yes	\$35,760
Network switches upgrade	\$107,588	No	0
ifix keys	\$14,268	No	0
GBT Cameras	\$43,483	No	0
Voice over IP system (VOIP)	\$53,868	No	0
Alteryx - new data analytics software	\$5,195	No	0
Orion weather system	\$7,536	No	0
Wireless network upgrade	\$33,384	No	0

Fuel Tanks	\$189,282	Yes	\$189,282
LIMS System (5 years)	\$71,642	No	0
PRIMARY CLARIFIER #6 Drive - Complete Rebuild	\$48,641	No	0
Nexgen Software	\$359,037	No	0
Handrails 0-11/30/2017	\$24,316	No	0
UPS System - UV	\$33,730	No	0
Compost PLC	\$13,857	No	0
Nexgen Software	\$106,902	No	0
UPS System - RSS West	\$33,730	No	0
UPS System - GBT	\$33,730	No	0
2013 Grove RT-540E Crane	\$274,100	No	0
2018 UV Structure Add-on	\$7,500	Yes	\$7,500
2018 Headworks Automatic Transfer Switch	\$87,547	Yes	\$87,547
Fuel Tanks, Stairs, & Grating	\$24,891	No	0
2017 UV Structure add-on	\$53,410	Yes	\$53,410
XLIMS Lab Software	\$7,534	No	0
Plant Security Cameras and System	\$48,923	No	0
Rotocut Chopper 1	\$19,125	No	0
2018 Toyota Tacoma SR5	\$30,831	No	0
Rotocut Chopper 2	\$19,125	No	0
Rotocut chopper 2	\$49,463	No	0
Rotocut Chopper 1	\$49,463	No	0
2018 Dodge Ram 2500	\$38,102	No	0
2018 JLG Telehandler Model 1055	\$148,780	No	0
Plant Process Control Network	\$157,041	No	0
2018 Backup Server	\$7,899	No	0
2018 Cogen Automatic Transfer Switch	\$364,660	Yes	\$364,660
2018 Backup Server	\$7,899	No	0
2018 Dual Core Heat Exchangers	\$119,628	Yes	\$119,628
2018 MCC Buckets (Power Gen Building)	\$30,536	Yes	\$30,536
AQ400 Discrete Analyzer	\$56,485	No	0
2018 Spector 38ft Push Trailer	\$86,751	No	0
2019 International Tractor	\$136,907	No	0
2018 Headworks Generators	\$9,022	Yes	\$9,022
2018 Biogas H2S Removal System	\$396,679	Yes	\$396,679
2018 Biogas Siloxane Removal System	\$537,464	Yes	\$537,464
2018 Chillers Air-Glycol	\$115,670	Yes	\$115,670
2018 Cogen Construction	\$2,577,056	Yes	\$2,577,056
2018 Odor Control Construction	\$759,504	Yes	\$759,504
2018 Nutrient Removal	\$3,937,549	Yes	\$3,937,549
2018 Secondary Clarifier 11 & 12	\$5,579,015	Yes	\$5,579,015

2018 3W Pump & Cooling Station	\$403,848	Yes	\$403,848
2018 Digester Gas Piping System	\$1,362,740	Yes	\$1,362,740
2018 Digester Mixing Systems #1, 2, 4	\$21,660	Yes	\$21,660
2018 Septage Receiving Software	\$49,748	No	0
2018 Primary & Secondary Clarifiers Launderers & Weirs #1 & #7	\$138,606	Yes	\$138,606
2018 Engine Replacement	\$2,344,860	Yes	\$2,344,860
2018 UV #2 Pass Equipment	\$51,678	No	0
New Tunnel Doors	\$10,979	No	0
Tyler Incode Software	\$153,997	No	0
Power Gen ATS	\$67,959	Yes	\$67,959
Power Gen Breaker Feeders	\$118,821	Yes	\$118,821
2018 CHEVROLET SILVERADO 2500	\$38,235	No	0
2018 International Roll-off Truck	\$167,601	No	0
2019 Flo-Dar Equipment	\$14,114	No	0
2019 Gas Flare System	\$25,301	Yes	\$25,301
2019 IFIX Primary Server	\$10,914	No	0
2019 IFIX Secondary Server	\$10,914	No	0
2019 Unity Server	\$10,914	No	0
2019 Becker Server Primary	\$5,338	No	0
2019 Becker Server Primary	\$5,338	No	0
2019 Genie Runabout lift	\$13,003	No	0
2019 Mini Excavator E35 ZTS	\$50,161	No	0
2019 International Dump Truck	\$181,695	No	0
2019 Toyota Tacoma	\$31,600	No	0
2019 Video Server	\$6,337	No	0
2019 Video Server	\$6,337	No	0
2019 Video Server	\$6,337	No	0
2019 Genetec Video Platform & Access Control Badges	\$38,889	No	0
2019 Roll-off Bin	\$8,950	No	0
2019 Hyster Forklift	\$50,315	No	0
2019 Genetec Video Access Platform	\$35,119	No	0
2019 Modicon OPC Server Software	\$10,469	No	0
Absorption Chiller	\$175,644	Yes	\$175,644
2019 Def Fueling Station	\$33,428	Yes	\$33,428
2020 PJ Dump Trailer	\$10,445	No	0
2019 PJ Dump Trailer	\$10,445	No	0
2019 Dry Polymer Feed System & Control System	\$6,020	No	0
2019 Secondary Clarifier Motor #8 (Rebuild)	\$44,620	Yes	\$44,620
2019 Cisco Video Network	\$143,424	No	0
2019 Steam Scrubber Dishwasher	\$9,647	No	0
2019 M580 PLC UV	\$51,387	Yes	\$51,387

2019 Primary Clarifier #3 Launderers	\$113,247	Yes	\$113,247
2019 Maintenance Metal Building Expansion	\$238,984	No	0
2019 On Point Server	\$14,886	No	0
2019 Secondary Clarifier #2 Launderers	\$124,182	Yes	\$124,182
2007 Madvac Street Sweeper	\$24,896	No	0
2019 Power Gen Elevator Rebuild	\$91,160	Yes	\$91,160
2019 Process Lore Server	\$13,525	No	0
2019 Corporate Lore Server	\$13,525	No	0
2019 South Interconnection	\$863,561	Yes	\$863,561
Murray/Cottonwood Slip Lining	\$2,894,204	Yes	\$2,894,204
2013 John Deere 624K Loader	\$157,484	No	0
2019 Headworks HVAC Replacement & Design	\$96,988	Yes	\$96,988
2019 Maintenance Building HVAC Replacements	\$14,400	No	0
2019 Mitsubishi 1100 UPS	\$32,460	No	0
2019 Misubishi 1100 UPS	\$32,460	No	0
2019 Tunnel HVAC Replacement	\$22,750	Yes	\$22,750
2019 Food Waste Receiving Station	\$243,807	Yes	\$243,807
2019 Headworks Backup Generator	\$644,518	Yes	\$644,518
2019 Chillers Air-Glycol	\$74,812	Yes	\$74,812
2019 Nutrient Removal	\$8,043,201	Yes	\$8,043,201
2019 Biogas H2S Removal System	\$112,216	Yes	\$112,216
2019 Power Gen Seismic	\$142,626	Yes	\$142,626
2019 Primary Clarifier #4 Launderers	\$205,171	Yes	\$205,171
2019 Cogen Engine Replacement	\$2,410,553	Yes	\$2,410,553
2019 Cogen Tunnel & Utility Relocation	\$1,524,413	Yes	\$1,524,413
2019 Digester Gas Management	\$1,797,393	Yes	\$1,797,393
2019 Secondary Clarifiers 11 & 12	\$2,824,206	Yes	\$2,824,206
2019 Odor Control Construction	\$2,878,059	Yes	\$2,878,059
2019 SCADA Upgrades	\$290,504	No	0
2019 3W Pump & Cooling Station	\$1,207,338	Yes	\$1,207,338
2019 Headworks Screening & Grit System	\$768,741	Yes	\$768,741
2019 South Salt Lake Force Main	\$507,672	Yes	\$507,672
2019 Digester 4 Mixing Systems	\$279,055	Yes	\$279,055
2019 Cogen Construction	\$374,405	Yes	\$374,405
2019 Centrifugal Chiller	\$275,635	Yes	\$275,635
2019 Admin Building Seismic	\$31,176	No	0
2019 UV Pass #2 Equipment	\$663,315	Yes	\$663,315
Hydromantis Software	\$29,920	No	0
2019 Kobota Tractor	\$18,952	No	0
2019 Sidestream Phosphorous	\$20,000	Yes	\$20,000
2019 Sidestream Nitrogen	\$20,000	Yes	\$20,000

2019 Seeq Server	\$8,252	No	0
2019 Hyper-V Server	\$10,566	No	0
2019 Seeq Software	\$11,400	No	0
2019 Plant Security Cameras and System	\$50,488	No	0
2019 M580 PLC Headworks	\$148,840	Yes	\$148,840
GHID Slip Lining	\$1,777,784	Yes	\$1,777,784
Blend Tank Rebuild	\$1,173,448	Yes	\$1,173,448
Equal Tank Rebuild	\$1,173,448	Yes	\$1,173,448
Influent Box Culvert	\$3,738,228	Yes	\$3,738,228
2019 Office Trailer	\$115,452	No	0
2019 Restroom Trailer	\$135,998	No	0
2019 Blower Building	\$388,146	Yes	\$388,146
2019 Secondary Clarifier #1 Launderers	\$124,157	Yes	\$124,157
2019 Primary Clarifier #5 Launderers	\$119,876	Yes	\$119,876
2020 Chevy Silverado 2500 Diesel	\$50,467	No	0
2020 Hyper-V Server	\$22,239	No	0
2020 Hyper-V Server	\$22,238	No	0
2020 Modicon Power Gen MCC Controller	\$4,410	No	0
2020 South Interconnection	\$53,938	Yes	\$53,938
2020 Primary Clarifier #4 Launderers	\$33,096	Yes	\$33,096
2020 Johnson Control IFI Workstation	\$35,626	No	0
2020 Headworks Backup Generator	\$4,531	Yes	\$4,531
2020 Cisco Video Network	\$33,805	No	0
2020 Secondary Clarifier #9 Launderers	\$900	Yes	\$900
2020 Digester 4 Mixing Systems	\$68,786	Yes	\$68,786
2020 Muffle Furnace	\$10,652	No	0
2020 Natural Gas Storage Trailer	\$31,035	No	0
2021 International Truck	\$159,916	No	0
2020 Flask Scrubber	\$10,910	No	0
2020 Plant Security Cameras and System	\$59,808	No	0
2020 Primary Sludge Line Replacement	\$52,498	Yes	\$52,498
2020 Centrifugal Chiller	\$57,020	Yes	\$57,020
2020 Cisco Firewall	\$83,082	No	0
2020 Sludge Bin Load Cells	\$45,455	Yes	\$45,455
2020 Roll-off Bin	\$6,060	No	0
2020 Roll-off Bin	\$6,060	No	0
2020 Toyota Tacoma TRD Double Cab	\$33,759	No	0
2020 Toyota Tacoma Access Cab	\$28,497	No	0
2020 Dingo Walk Behind Loader	\$23,131	No	0
2020 UV Pass #2 Equipment	\$201,897	Yes	\$201,897
2020 Secondary Clarifier #1 Launderers	\$26,551	Yes	\$26,551

2020 Secondary Clarifier #2 Launderers	\$26,551	Yes	\$26,551
2020 Headworks System Controls	\$9,629	Yes	\$9,629
2020 3 Water & Pump Building System Controls	\$5,156	Yes	\$5,156
2020 Cogen System Controls	\$47,030	Yes	\$47,030
2020 Fuel Trailer	\$19,807	No	0
2020 Digester #3 Lid	\$685,130	Yes	\$685,130
2020 Fire Alarm System	\$76,135	Yes	\$76,135
2020 UV Forbay & Afterbay Mixing System	\$86,428	Yes	\$86,428
2020 SCADA Upgrades	\$53,520	No	0
2020 Murray/Cottonwood Siphon	\$84,854	Yes	\$84,854
2020 3 Water & Pump Building	\$5,268,776	Yes	\$5,268,776
2020 BNR Construction	\$3,080,045	Yes	\$3,080,045
2020 Blower Building	\$3,730,811	Yes	\$3,730,811
2020 Sidestream Phosphorus	\$550,590	Yes	\$550,590
2020 Sidestream Nitrogen	\$303,911	Yes	\$303,911
2020 Thickening Building	\$686,243	Yes	\$686,243
2020 Secondary Clarifier #4 Launderers	\$220,471	Yes	\$220,471
2020 South Salt Lake Force Main	\$1,377,189	Yes	\$1,377,189
2020 Odor Control Construction	\$386,904	Yes	\$386,904
2020 Secondary Clarifiers 11 & 12	\$241,209	Yes	\$241,209
2020 Headworks Bar Screens and Screw Conveyers	\$2,408,477	Yes	\$2,408,477
2020 Power Gen Elevator Rebuild	\$82,044	Yes	\$82,044
2020 Headworks Switch Gear 5KV	\$21,759	Yes	\$21,759
2020 Cogen Engine Replacement	\$2,102,920	Yes	\$2,102,920
2020 Digester Gas Management	\$162,666	Yes	\$162,666
2020 Trash Pump	\$90,548	Yes	\$90,548
Total	\$326,072,303		\$205,347,019

Appendix B-2
CVWRF Capital Improvement Plan

Table B-2.1: CVWRF CIP

Project ID	Project Name	Project Total	Impact Fee Eligible	Eligible Project Cost
I. Collection System/Field Projects				
FLD01	Cottonwood Murray (South of 3300 S) Sliplining	\$0	No	\$0
FLD02	South Salt Lake Force Main (Interceptor) Rehabilitation/Replacement (New Lining 2021)	\$1,682,522	Yes	\$1,450,000
FLD03	Influent Box Channel (Rehab, Gates, Vent)	\$0	No	\$0
FLD04	GHID Siphon Lining/Rehabilitation	\$0	No	\$0
FLD05	Influent Bypass Box and Vitro Ditch Piping Lining/Rehabilitation	\$2,907,450	Yes	\$0
FLD08	Big Cottonwood Creek Siphon/Inlet Box Rehab and Tunnel Filtrate Line CIPP Lining, GH Vent	\$2,402,000	Yes	\$2,402,000
FLD09	Lid/Gates for GH Siphon Inlet	\$100,000	Yes	\$100,000
A. Liquid Treatment Process Projects				
LTP01A	Maintenance Building HVAC Upgrades	\$1,665,000	Yes	\$1,665,000
LTP02B	Maintenance Building Seismic Upgrades	\$1,450,000	Yes	\$1,450,000
	UV HVAC Replacement	\$106,250	Yes	\$106,250
LTP01E	Digester Buildings HVAC Upgrades	\$500,000	Yes	\$500,000
LTP01F	Tunnel and Misc. Building HVAC Upgrades	\$1,590,000	Yes	\$1,590,000
LTP02G	Tunnel and Misc. Building Seismic Upgrades	\$825,000	Yes	\$825,000
LTP02E	East & West Digester Control Buildings Seismic Upgrades	\$1,400,000	Yes	\$1,400,000
LTP02F	Headworks Channels/Grit Tanks/Primary Influent Channel Rehab and Lining	\$1,050,000	Yes	\$1,050,000
LTP05	Headworks Screenings and Grit System Replacement (CC10C)	\$18,220,440	Yes	\$17,409,815
LTP11	Primary & Secondary Clarifier Launder Replacement	\$3,953,079	Yes	\$3,165,579
LTP12	New RAS Pumps 1-8	\$1,415,000	Yes	\$1,235,000
LTP14	Rebuild Primary Clarifier Drives 7-10	\$228,300	Yes	\$228,300
LTP15	Rebuild Secondary Clarifier Drives	\$208,000	No	\$0
LTP16	Secondary Clarifier No. 1-8 Gate Repair/Replacement (8 units)	\$205,800	Yes	\$205,800
LTP17	3W/Cooling Pump Station, Hypochlorite System, Reuse Filters	\$34,504,440	Yes	\$30,454,440
LTP21	UV Pass No. 2 Equipment	\$210,000	No	\$0
LTP23	Headworks, Fermentors, Sludge Thickening Odor Control	\$550,000	Yes	\$550,000
LTP25	New Influent Pumps	\$3,599,260	Yes	\$1,199,260
LTP07	Influent Pump Right Angle Gear Drive Rebuild and new impeller	\$382,450	Yes	\$314,200
LTP27	UV Equipment Replacement	\$4,764,375	Yes	\$0
LTP28	UV Building Screen Replacement	\$367,500	Yes	\$367,500
LTP29	Aeration Basin Diffuser Replacement	\$2,100,000	No	\$0
LTP32	UV Forbay and Afterbay Mixing	\$239,000	Yes	\$239,000
LTP34	Headworks Area Piping Replacement	\$86,800	Yes	\$86,800
LTP23	Odor Control Buildout	\$285,000	Yes	\$285,000

CENTRAL VALLEY WATER RECLAMATION FACILITY

	Admin Building Improvements & Expansion	\$0	Yes	\$0
CV16-2020	Dumpster Veyor	\$23,000	Yes	\$23,000
	Deep Sump Cover and Safety System	\$50,000	Yes	\$50,000
B. Biosolids Treatment and Disposal Projects				
BTD06	Digester No. 6-7 Mixing Pump Replacement	\$579,461	Yes	\$329,461
BTD07	Sludge Cake and Polymer Pump Rebuild	\$175,000	Yes	\$0
BTD08	New Dry Polymer Feed System/Upgrade Controls Existing System	\$52,500	No	\$0
BTD09	Refurbish Filtrate Tanks	\$1,000,000	Yes	\$1,000,000
BTD10	Refurbish Equalization and Blend Tanks	\$550,000	No	\$0
BTD11	Compost Covers (six)	\$750,883	Yes	\$675,883
BTD13	Digester 1-5 Mixing Systems Replacement (Vaughn Jet Mixing)	\$2,208,364	Yes	\$2,040,864
BTD 14	Digester 1-5 Cover Replacement	\$17,021,125	Yes	\$17,021,125
BTD 15	Replace Dewatering Seismic, Ventilation, Sludge Silo, and Equipment	\$31,100,000	Yes	\$31,100,000
BTD03	Egg Shaped Digester Recoating / New Exterior Sheathing (2)	\$4,350,000	Yes	\$4,350,000
BTD17	Primary sludge line replacement	\$85,000	Yes	\$85,000
BTD18	Roll Off Bins	\$31,620	Yes	\$31,620
	Sludge Drainage Pond Lining	\$0	No	\$0
BTD19	BFP Sludge Pump	\$100,000	Yes	\$100,000
	Contingency	\$3,817,025		\$0
C. Energy Management Projects				
EM04	Rebuild Transformers (every 5 years)	\$354,636	Yes	\$215,988
EM06	New Jenbacher Future Projects (Total Overhaul)	\$3,000,000	Yes	\$750,000
EM07	New Jenbacher Future Projects (Top end rebuild)	\$1,000,000	Yes	\$1,000,000
EM14	Cogen System Upgrades (Gas Treatment, Engine 1 & 2 Replacement, Cooling System Replacement)	\$6,561,600	Yes	\$5,736,600
EM15	Heat Loop Circulation Pump Replacement (2 units)	\$0	No	\$0
EM16	Centrifugal Chiller and 3-stage Chiller Replacement	\$797,000	Yes	\$429,500
EM18	Aeration and Channel Blower Replacement	\$0	Yes	\$0
EM19	Air Compressor Replacement	\$426,300	No	\$0
EM21	Cathodic Protection Replacement	\$850,000	Yes	\$850,000
EM-M	Hydropneumatic Tank Replacement	\$200,000	Yes	\$200,000
EM22	Headworks 5KV Switchgear Replacement	\$1,462,600	Yes	\$1,462,600
EM23	Headworks Backup Generator (2 New 4160 V)	\$0	No	\$0
EM10	Power Gen. Swamp Coolers Replacement	\$0	No	\$0
EM24	NG Storage Trailer for PreChamber	\$203,500	Yes	\$203,500
EM25	Air Gap Tank Replacement	\$50,000	Yes	\$50,000
EM26	Plant Wide Load Shed	\$297,965	Yes	\$297,965
D. General Facilities and Grounds Projects				
GFG03	Fire Protection System Changeout	\$574,350	Yes	\$574,350

CENTRAL VALLEY WATER RECLAMATION FACILITY

GFG03	Power Gen	\$700,000	Yes	\$700,000
	Headworks	\$350,000	Yes	\$350,000
	3 Water	\$80,000	Yes	\$80,000
	Blower Building	\$455,000	Yes	\$455,000
	Maintenance	\$300,000	Yes	\$300,000
	Sidestream Phosphorous	\$75,000	Yes	\$75,000
	Filtrate Building	\$25,000	Yes	\$25,000
	Sidestream Nitrogen	\$75,000	Yes	\$75,000
	RAS/WAS	\$130,000	Yes	\$130,000
	Strainer Bldg	\$350,000	Yes	\$350,000
	RAS/WAS Selector Electrical (BNR)	\$60,000	Yes	\$60,000
	Area 16 EB (BNR)	\$75,000	Yes	\$75,000
	Admin Building	\$150,000	Yes	\$150,000
	Dewatering	\$500,000	Yes	\$500,000
	UV Building	\$105,000	Yes	\$105,000
GFG05	Secondary Clarifiers Gearbox Rebuild (2 units)	\$0	No	\$0
GFG06	Metal Building Expansion	\$223,650	No	\$0
GFG07	Metal Building Rehab	\$456,750	Yes	\$456,750
GFG08	Blowdown Pond Improvement and Sealing	\$374,850	Yes	\$374,850
GFG10	Underground fuel storage tank removal	\$0	No	\$0
GFG11	Power Gen Elevator	\$249,000	Yes	\$149,000
GFG12	Tunnel Filtrate Line CIPP Lining	\$0	No	\$0
GFG13	DEF Fueling Station	\$25,000	No	\$0
GFG15	Shower and Eye Wash Tempering	\$154,545	Yes	\$154,545
LTP02D	Admin Building Seismic Upgrades	\$1,200,000	Yes	\$1,200,000
GFG16	Admin Building Roof/HVAC units	\$400,000	Yes	\$400,000
GFG17	Security Fencing & Gate Upgrades Around Plant	\$210,000	Yes	\$210,000
GFG18	Additional Diesel Storage Tank	\$150,000	Yes	\$150,000
GFG19	Electrical Conduit Bending Equipment	\$8,000	Yes	\$8,000
GFG20	Pretreatment Ice Machine	\$6,000	No	\$0
GFG21	Pretreatment Sampling Equipment	\$13,900	No	\$0
GFG22	Safety Gantry Equipment	\$10,000	No	\$0
GFG23	Natural Gas Meter Relocation	\$670,000	Yes	\$670,000
GFG24	Landa Pressure Washers	\$82,500	No	\$0
	Headworks Bridge Crane	\$0	No	\$0
	Headworks Overhead Crane (2)	\$0	No	\$0
	Maintenance Building Crane	\$0	No	\$0
	Maintenance Building Roof	\$0	No	\$0
	Dewatering Building Roof	\$0	No	\$0
	Digester Building Roofs	\$0	No	\$0
	GBT Building Roof	\$0	No	\$0
	Ras Building Roof	\$0	No	\$0
	Taco Building Roofs	\$0	No	\$0
	Power Gen Building Roof	\$0	No	\$0
E. Rolling Stock				
RS01	Compost Rotomix Conveyor (for Existing Truck)	\$165,900	No	\$0
RS02	New Compost Rotomix and Truck	\$670,950	No	\$0
RS03	Scarab Compost Turner	\$1,096,200	No	\$0
RS04	Tarp Winder	\$274,050	No	\$0
RS05	Compost Screen	\$617,400	No	\$0
RS06	Wood Chipper	\$1,637,150	No	\$0

RS07	Sludge Trucks and Trailers	\$1,931,720	No	\$0
RS08	Grit/Screenings Truck and Roll Off Dumpsters	\$687,750	No	\$0
RS09	Scissor Lift/Boom Lift	\$257,250	No	\$0
RS10	Fork Lift	\$236,950	No	\$0
RS11	Boom Truck/Crane	\$562,500	No	\$0
RS12	10 Wheel Dump	\$727,650	No	\$0
RS13	Engineering/Field Services Pickup	\$0	No	\$0
RS14	Pretreatment Sampling Vehicle	\$899,145	No	\$0
RS15	Front End Loader	\$1,796,000	No	\$0
RS16	Operations and Maintenance Pickups	\$1,101,127	No	\$0
RS17	Mini Excavator	\$105,000	No	\$0
RS18	Large telehandler lift	\$225,000	No	\$0
RS19	Trash Pump	\$100,000	No	\$0
RS20	Dingo Skid Steer	\$23,155	No	\$0
CV17 - 2020	Fuel Trailer	\$19,000	No	\$0
CV18 - 2020		\$0	No	\$0
RS21	Skid steer loader	\$115,000	No	\$0
RS22	Spider Crane	\$65,000	No	\$0
RS23	John Deere Roll Off Bucket	\$37,000	No	\$0
F. IT Projects				
IT05	Asset Management Software and Setup	\$651,000	No	\$0
IT06	Phone VOIP Replacement	\$95,550	No	\$0
IT07	Flow Stations - New Radio Frequency (digital)	\$198,450	No	\$0
IT10	Color Copier/Scanner	\$35,700	No	\$0
IT12	Endura VMS (Video Management System)	\$159,600	No	\$0
IT13	Fiber Network Upgrades	\$0	No	\$0
IT15	Electronic O&Ms	\$78,750	No	\$0
IT16	SCADA/PLC Changeout and Upgrades	\$4,670,830	No	\$0
IT 19	Control Room Console Equipment and Screen Replacement	\$393,750	No	\$0
IT 20	IT Server Replacement Rotation	\$193,948	No	\$0
IT 21	Plant Gates	\$210,000	No	\$0
IT 22	UV Channel Power Distributions Units	\$437,000	No	\$0
IT 23	Operator Logbook replacement	\$50,000	No	\$0
IT 24	PLC M580 Change Out Headworks/UV	\$100,000	No	\$0
IT 25	Pretreatment IUMS Software	\$50,000	No	\$0
IT 26	HR Software	\$82,100	No	\$0
IT 27	Septage Receiving Station	\$103,000	No	\$0
IT 28	PI Tags	\$40,000	No	\$0
IT 29	New Process Control Network HLS	\$0	No	\$0
IT 30	Admin & Headworks & PowerGen Roof Cameras	\$92,000	No	\$0
IT 31	Firewall Upgrade	\$90,000	No	\$0
IT 32	Hach/Wims (Engineering)	\$50,000	No	\$0
G. Lab Projects				
LAB01	GC/MS System	\$411,600	No	\$0
LAB02	LIMS System	\$247,450	No	\$0
LAB03	Discrete Analyzer	\$112,350	No	\$0
LAB04	LC/MS System	\$446,250	No	\$0
LAB05	Flask Scrubber Washer	\$55,656	No	\$0
LAB06	Muffle Furnace	\$56,450	No	\$0
LAB07	ICP MS	\$450,000	No	\$0
LAB08	Drying Oven	\$14,260	No	\$0

CENTRAL VALLEY WATER RECLAMATION FACILITY

LAB09	Analytical Pump	\$49,000	No	\$0
LAB10	Autoclave Sterilizer	\$40,000	No	\$0
H. Nutrient Removal Upgrade Projects				
CC 10B	PRIMARY EFFLUENT CHANNEL - SOUTH INTERCONNECTION CC 10B	\$500	Yes	\$500
CC 30AE	CONSTRUCTION CONTRACT 30A (CC 30A) BLOWER BUILDING	\$77,079,095	Yes	\$77,079,095
CC 30B	CONSTRUCTION CONTRACT 30B (CC 30B) BNR BASINS/PEPS	\$126,239,306	Yes	\$126,239,306
CC 30C	CONSTRUCTION CONTRACT 30C (CC 30C) SIDESTREAM PHOSPHORUS	\$16,303,725	Yes	\$16,303,725
CC 30D	CONSTRUCTION CONTRACT 30D (CC 30D) THICKENING BUILDING	\$53,249,033	Yes	\$53,249,033
CC 30EF	CONSTRUCTION CONTRACT 30E (CC 30E) SIDESTREAM NITROGEN	\$27,957,503	Yes	\$27,957,503
	CONSTRUCTION CONTRACT 30E (CC 30E) SIDESTREAM N Seismic	\$0	Yes	\$0
CC 10D	CONSTRUCTION CONTRACT 10D (CC 10D) SITE RESTORATION/Demo	\$8,812,685	Yes	\$8,812,685
NUT05	Accelerate design/construction of Two Secondary Clarifiers for Nutrient Removal	\$1,956,000	Yes	\$210,000
NUT06	Food Waste Receiving Facility	\$8,624,000	Yes	\$8,200,000
	Total	\$515,571,226		\$462,111,390

Appendix B-3
CVWRF Bond Payment Schedule

Table B-3.1: CVWRF Bond Payment Schedule

Year	2017A Sewer Revenue Bonds			2017B Sewer Revenue Bonds			2019A Sewer Revenue Bonds			2020A State SRF Loan		
	Interest	Principal	Balance	Interest	Principal	Balance	Interest	Principal	Balance	Interest	Principal	Balance
2016												
2017	\$148,204		\$28,600,000			\$3,445,000						
2018	\$1,287,725	\$905,000	\$27,695,000	\$90,491	\$350,000	\$3,095,000						
2019	\$1,255,450	\$935,000	\$26,760,000	\$74,065	\$410,000	\$2,685,000	\$268,343		\$35,390,000			
2020	\$1,217,250	\$975,000	\$25,785,000	\$65,655	\$420,000	\$2,265,000	\$1,610,100	\$1,090,000	\$34,300,000			\$15,000,000
2021	\$1,177,450	\$1,015,000	\$24,770,000	\$56,088	\$430,000	\$1,835,000	\$1,554,100	\$1,150,000	\$33,150,000	\$675,000	\$0	\$45,000,000
2022	\$1,130,650	\$1,060,000	\$23,710,000	\$45,535	\$440,000	\$1,395,000	\$1,495,225	\$1,205,000	\$31,945,000	\$976,500	\$1,010,000	\$65,100,000
2023	\$1,076,275	\$1,115,000	\$22,595,000	\$33,960	\$450,000	\$945,000	\$1,433,350	\$1,270,000	\$30,675,000	\$976,500	\$2,815,297	\$62,284,703
2024	\$1,019,025	\$1,175,000	\$21,420,000	\$21,143	\$465,000	\$480,000	\$1,368,225	\$1,335,000	\$29,340,000	\$934,271	\$2,857,526	\$59,427,177
2025	\$958,775	\$1,235,000	\$20,185,000	\$7,200	\$480,000	\$0	\$1,310,150	\$1,390,000	\$27,950,000	\$891,408	\$2,900,389	\$56,526,788
2026	\$895,400	\$1,300,000	\$18,885,000				\$1,260,325	\$1,440,000	\$26,510,000	\$847,902	\$2,943,895	\$53,582,893
2027	\$828,775	\$1,365,000	\$17,520,000				\$1,197,575	\$1,505,000	\$25,005,000	\$803,743	\$2,988,054	\$50,594,839
2028	\$758,775	\$1,435,000	\$16,085,000				\$1,120,450	\$1,580,000	\$23,425,000	\$758,923	\$3,032,874	\$47,561,965
2029	\$692,900	\$1,500,000	\$14,585,000				\$1,039,325	\$1,665,000	\$21,760,000	\$713,429	\$3,078,368	\$44,483,597
2030	\$631,700	\$1,560,000	\$13,025,000				\$953,950	\$1,750,000	\$20,010,000	\$667,254	\$3,124,543	\$41,359,054
2031	\$568,000	\$1,625,000	\$11,400,000				\$864,325	\$1,835,000	\$18,175,000	\$620,386	\$3,171,411	\$38,187,643
2032	\$501,700	\$1,690,000	\$9,710,000				\$770,200	\$1,930,000	\$16,245,000	\$572,815	\$3,218,982	\$34,968,661
2033	\$432,700	\$1,760,000	\$7,950,000				\$671,200	\$2,030,000	\$14,215,000	\$524,530	\$3,267,267	\$31,701,394
2034	\$351,500	\$1,840,000	\$6,110,000				\$577,950	\$2,125,000	\$12,090,000	\$475,521	\$3,316,276	\$28,385,118
2035	\$257,125	\$1,935,000	\$4,175,000				\$491,250	\$2,210,000	\$9,880,000	\$425,777	\$3,366,020	\$25,019,098
2036	\$157,875	\$2,035,000	\$2,140,000				\$401,050	\$2,300,000	\$7,580,000	\$375,286	\$3,416,511	\$21,602,587
2037	\$53,500	\$2,140,000	\$0				\$307,150	\$2,395,000	\$5,185,000	\$324,039	\$3,467,758	\$18,134,829
2038							\$195,500	\$2,550,000	\$2,635,000	\$272,022	\$3,519,775	\$14,615,054
2039							\$65,875	\$2,635,000	\$0	\$219,226	\$3,572,571	\$11,042,483
2040										\$165,637	\$3,626,160	\$7,416,323
2041										\$111,245	\$3,680,552	\$3,735,771
2042										\$56,037	\$2,725,771	\$0
2043												
Total	\$15,400,754	\$28,600,000		\$394,136	\$3,445,000		\$18,955,618	\$35,390,000		\$12,387,451	\$65,100,000	

Table B-3.1 (Cont.): CVWRF Bond Payment Schedule

Year	2021A Sewer Loan			2021B Sewer Loan			2021C Sewer Loan			2024 Sewer Loan (Projected)		
	Interest	Principal	Balance	Interest	Principal	Balance	Interest	Principal	Balance	Interest	Principal	Balance
2021	\$169,668	\$0	\$25,000,000	\$210,271	\$0	\$23,720,000	\$1,318,729	\$0	\$127,105,000			
2022	\$400,363	\$1,105,000	\$23,895,000	\$840,825	\$775,000	\$22,945,000	\$5,394,800	\$0	\$127,105,000			
2023	\$391,764	\$1,114,000	\$22,781,000	\$801,075	\$815,000	\$22,130,000	\$5,324,800	\$2,800,000	\$124,305,000			\$60,000,000
2024	\$382,254	\$1,123,000	\$21,658,000	\$759,325	\$855,000	\$21,275,000	\$5,181,175	\$2,945,000	\$121,360,000	\$3,000,000	\$1,814,555	\$58,185,445
2025	\$371,814	\$1,134,000	\$20,524,000	\$715,450	\$900,000	\$20,375,000	\$5,030,175	\$3,095,000	\$118,265,000	\$2,909,272	\$1,905,283	\$56,280,162
2026	\$360,703	\$1,145,000	\$19,379,000	\$669,325	\$945,000	\$19,430,000	\$4,871,425	\$3,255,000	\$115,010,000	\$2,814,008	\$2,000,547	\$54,279,615
2027	\$348,614	\$1,157,000	\$18,222,000	\$620,825	\$995,000	\$18,435,000	\$4,704,425	\$3,425,000	\$111,585,000	\$2,713,981	\$2,100,574	\$52,179,040
2028	\$335,523	\$1,170,000	\$17,052,000	\$569,825	\$1,045,000	\$17,390,000	\$4,528,800	\$3,600,000	\$107,985,000	\$2,608,952	\$2,205,603	\$49,973,437
2029	\$321,396	\$1,184,000	\$15,868,000	\$516,200	\$1,100,000	\$16,290,000	\$4,344,175	\$3,785,000	\$104,200,000	\$2,498,672	\$2,315,883	\$47,657,554
2030	\$305,896	\$1,200,000	\$14,668,000	\$471,525	\$1,145,000	\$15,145,000	\$4,150,175	\$3,975,000	\$100,225,000	\$2,382,878	\$2,431,678	\$45,225,876
2031	\$288,972	\$1,217,000	\$13,451,000	\$436,650	\$1,180,000	\$13,965,000	\$3,946,300	\$4,180,000	\$96,045,000	\$2,261,294	\$2,553,261	\$42,672,615
2032	\$270,578	\$1,235,000	\$12,216,000	\$400,725	\$1,215,000	\$12,750,000	\$3,754,400	\$4,370,000	\$91,675,000	\$2,133,631	\$2,680,925	\$39,991,690
2033	\$250,653	\$1,255,000	\$10,961,000	\$363,675	\$1,255,000	\$11,495,000	\$3,576,000	\$4,550,000	\$87,125,000	\$1,999,585	\$2,814,971	\$37,176,719
2034	\$229,134	\$1,276,000	\$9,685,000	\$325,500	\$1,290,000	\$10,205,000	\$3,390,300	\$4,735,000	\$82,390,000	\$1,858,836	\$2,955,719	\$34,221,000
2035	\$206,278	\$1,299,000	\$8,386,000	\$286,200	\$1,330,000	\$8,875,000	\$3,197,000	\$4,930,000	\$77,460,000	\$1,711,050	\$3,103,505	\$31,117,495
2036	\$182,019	\$1,323,000	\$7,063,000	\$245,700	\$1,370,000	\$7,505,000	\$2,995,800	\$5,130,000	\$72,330,000	\$1,555,875	\$3,258,680	\$27,858,814
2037	\$155,950	\$1,350,000	\$5,713,000	\$204,000	\$1,410,000	\$6,095,000	\$2,786,400	\$5,340,000	\$66,990,000	\$1,392,941	\$3,421,615	\$24,437,200
2038	\$127,292	\$1,378,000	\$4,335,000	\$161,025	\$1,455,000	\$4,640,000	\$2,568,400	\$5,560,000	\$61,430,000	\$1,221,860	\$3,592,695	\$20,844,505
2039	\$95,226	\$1,409,000	\$2,926,000	\$116,700	\$1,500,000	\$3,140,000	\$2,341,500	\$5,785,000	\$55,645,000	\$1,042,225	\$3,772,330	\$17,072,175
2040	\$59,907	\$1,444,000	\$1,482,000	\$71,025	\$1,545,000	\$1,595,000	\$2,105,400	\$6,020,000	\$49,625,000	\$853,609	\$3,960,947	\$13,111,228
2041	\$20,748	\$1,482,000	\$0	\$23,925	\$1,595,000	\$0	\$1,859,700	\$6,265,000	\$43,360,000	\$655,561	\$4,158,994	\$8,952,234
2042							\$1,603,900	\$6,525,000	\$36,835,000	\$447,612	\$4,366,944	\$4,585,291
2043							\$1,337,600	\$6,790,000	\$30,045,000	\$229,265	\$4,585,291	\$0
2044							\$1,060,500	\$7,065,000	\$22,980,000			
2045							\$772,100	\$7,355,000	\$15,625,000			
2046							\$471,900	\$7,655,000	\$7,970,000			
2047							\$159,400	\$7,970,000	\$0			
Total	\$5,274,750	\$25,000,000		\$8,809,771	\$23,720,000		\$82,775,279	\$127,105,000		\$36,291,105	\$60,000,000	