

AGENDA

REGULAR MEETING OF THE BOARD OF COMMISSIONERS
VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY (VWVRA)
Victorville City Hall – Conference Room “D”, 14343 Civic Drive, Victorville, CA
92392
Phone: (760) 246-8638

MEETING DATE: Thursday, September 19, 2019 **TIME: 7:30 AM (Closed Session)**
8:00 AM (Regular Session)

CALL TO ORDER

PUBLIC COMMENTS – CLOSED SESSION AGENDA

CLOSED SESSION

CLOSED SESSION: During the course of conducting the business set forth on this agenda as a regular meeting of the Board, the Chair may convene the Board in closed session to consider matters of pending real estate negotiations, pending or potential litigation, or personnel matters, pursuant to Government Code Sections 54956.8, 54956.9, 54957 or 54957.6, as noted. Reports relating to (a) purchase and sale of real property; (b) matters of pending or potential litigation; or (c) employment actions, or which are exempt from public disclosure under the California Public Records Act, may be reviewed by the Board during a permitted closed session and are not available for public inspection. At such time the Board takes final action on any of these subjects, the minutes will reflect all required disclosures of information. Closed Session is scheduled to commence at 8:00 a.m.. If the matters discussed in closed session require additional time beyond 9:00 a.m., in deference to the public, the Board may continue the Closed Session discussion after Open Session is concluded. In that case, Closed Session will resume after the Commissioners Comments section and any reportable action will be reported after the continued Closed Session has concluded and before adjournment.

CONFERENCE WITH LEGAL COUNSEL- (Gov. Code Sec. 54954.5-54956.9(d)):

1. **Flow Diversion**

CONFERENCE WITH LEGAL COUNSEL-POTENTIAL LITIGATION (Gov. Code Sec. 54956.9(d)):

2. **Threatened or Potential Litigation- Upper Narrows Project**
3. **Threatened or Potential Litigation- Lahontan- NPDES Permit Negotiations**

CONFERENCE WITH LEGAL COUNSEL—EXISTING LITIGATION- (Gov. Code Sec. 54956.9 (1)(D)):

Valles v. VWVRA, Case No. CIVDS 1822066

CONFERENCE WITH LEGAL COUNSEL-REAL PROPERTY NEGOTIATOR (Govt. Code Sec. 54956.8)

4. **Agency Negotiators: Brian Macy, Interim General Manager; Piero Dallarda, Best Best Krieger**
Negotiating Party/Parties: High Desert Solar, Dennis Corn
Under Negotiation: Real Property

CONFERENCE WITH LEGAL COUNSEL-PUBLIC EMPLOYEE APPOINTMENT (Gov. Code Sec. 54957):

5. **General Manager**

A. Candidate Interviews

REGULAR SESSION

CALL TO ORDER & PLEDGE OF ALLEGIANCE

REPORT FROM CLOSED SESSION

PUBLIC COMMENTS – REGULAR SESSION AGENDA

ANNOUNCEMENTS AND CORRESPONDENCE:

6. **Possible conflict of interest issues**

CONSENT CALENDAR:

7. **Approve August 2019 Disbursement Registers**
8. **Approve Minutes from the August 15, 2019 Regular Meeting**
9. **Recommendation to Approve Employment Contract for Plant Superintendent**

ACTION & DISCUSSION ITEMS:

10. **Resolution 2019-14: Adoption of VVWRA Rate Study from Raftelis**

PUBLIC HEARING:

11. **First Reading of Ordinance 001: Rules and Regulations for Sewer Service**

ACTION & DISCUSSION ITEMS:

12. **Recommendation to Schedule Second Hearing for Ordinance 001: Rules and Regulations for Sewer Service**

PUBLIC HEARING:

13. First Reading of Ordinance 002: Connection Fee

ACTION & DISCUSSION ITEMS:

14. Recommendation to Schedule Second Hearing for Ordinance 002: Connection Fee Ordinance

15. Recommendation to Approve Amendment for Larry Walker & Associates Professional Services for Sanitary Sewer Management Plan Update

16. Recommendation to Approve Easement for High Desert Solar

STAFF/PROFESSIONAL SERVICES REPORTS:

17. Financial and Investment Report – August 2019

18. Operations & Maintenance Report – August 2019

19. Environmental Compliance Department Reports – August 2019

20. Septage Receiving Facility Reports – August 2019

21. Safety & Communications Report – August 2019

NEXT VVWRA BOARD MEETING:

Thursday, October 17, 2019 - Regular Meeting of the Board of Commissioners

FUTURE AGENDA ITEMS

Second Hearing for Ordinance 001

Second Public Hearing for Ordinance 002

Bid Results for PLC's Replacement Project

Bid Results for Regional Plant Storm Water Project

USDA Loan and Grant for the Oro Grand Interceptor Project

COMMISSIONER COMMENTS

CLOSED SESSION (If Closed Session is continued as set forth above)

ADJOURNMENT

VVWRA Regular Meeting Agenda

Thursday, September 19, 2019

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Agenda Posting: In accordance with the requirements of California Government Code Section 54954.2, this agenda has been posted in the main lobby of the Authority's Administrative offices not less than 72 hours prior to the meeting date and time above. All written materials relating to each agenda item are available for public inspection in the office of the Board Secretary.

Items Not Posted: In the event any matter not listed on this agenda is proposed to be submitted to the Board for discussion and/or action, it will be done in compliance with Section 54954.2(b) as an emergency item or because there is a need to take immediate action, which came to the attention of the Board subsequent to the posting of the agenda, or as set forth on a supplemental agenda posted in the manner as above, not less than 72 hours prior to the meeting date.

Public Comments: Any member of the public may address the Board of Commissioners on specific agenda items or matters of general interest. As determined by the Chair, speakers may be deferred until the specific item is taken for discussion and remarks may be limited to five minutes. Persons desiring to submit paperwork to the Board of Commissioners shall provide a copy of any paperwork to the Board Secretary for the official record.

Matters of Interest addressed by a member of the public and not listed on this agenda cannot have action taken by the Board of Commissioners except as authorized by Section 54954.2(b). If you wish to speak, please complete a Speaker's Form (located at the table in the lobby outside of the Board Room) and give it to the Board Secretary prior to the start of the meeting.

If any individual wishes to challenge an action of the Commission in court, he or she may be limited to raising those issues that were raised at the public hearing pertaining to the Commission's actions, or in any written correspondence delivered to the Commission on or prior to the public hearing.

Consent Calendar: All matters placed on the Consent Calendar are considered as not requiring discussion or further explanation and unless any particular item is requested to be removed from the Consent Calendar by a Commissioner, staff member or member of the public in attendance, there will be no separate discussion of these items. All items on the Consent Calendar will be enacted by one action approving all motions, and casting a unanimous ballot for resolutions included on the consent calendar. All items removed from the Consent Calendar shall be considered in the regular order of business.

The Chair will determine if any items are to be deleted from the Consent Calendar.

Items Continued: Items may be continued from this meeting without further notice to a Committee or Board meeting held within five (5) days of this meeting per Government Code Section 54954.2(b)(3).

Meeting Adjournment: This meeting may be adjourned to a later time and items of business from this agenda may be considered at the later meeting by Order of Adjournment and Notice in accordance with Government Code Section 54955 (posted within 24 hours).

Accommodations for the Disabled: In compliance with the Americans with Disabilities Act (ADA), the Board of Commissioners Meeting Room is wheelchair accessible. If you require any special disability related accommodations, please contact the Victor Valley Wastewater Reclamation Authority Board Secretary's office at 760-246-2892 at least 72 hours prior to the scheduled meeting. Requests must specify the nature of the disability and the type of accommodation requested.




Victor Valley Wastewater Reclamation Authority
A Joint Powers Authority and Public Agency of the State of California

20111 Shay Rd. Victorville, CA 92394
 Telephone: (760) 246-8638
 Fax: (760) 948-9897

DATE: September 10, 2019

TO: Brian Macy
 Interim General Manager

FROM: Chieko Keagy 
 Controller

SUBJECT: Cash Disbursements Register

RECOMMENDED ACTION

It is recommended that the Board of Commissioners approve the cash disbursements and payroll register for the Victor Valley Wastewater Reclamation Authority.

BACKGROUND

The Cash Disbursements Register totals represented below are for the month of AUGUST 2019, check numbers 122663-122722 and ACH's.

<i>Accounts Payable</i>			
<i>Checks</i>	<i>ACH's and EFT's</i>	<i>Payroll</i>	<i>Total</i>
<i>\$424,521.13</i>	<i>\$537,064.75</i>	<i>\$322,131.18</i>	<i>\$1,283,717.06</i>

Victor Valley Wastewater Reclamation Authority
Cash Disbursement Register
From 8/1/19 through 8/31/19

Vendor #	Vendor Name	Type	Payment #	Total
GEIN000	ABB Inc	Check	122663	\$ 37,092.94
AME000	AMETEK Technical & Industrial Products Inc	Check	122664	\$ 794.22
APPL004	APPLIED INDUSTRIAL TECHNOLOGIES	Check	122665	\$ 6,508.80
AQUA004	AQUA-AEROBIC SYSTEMS, INC	Check	122666	\$ 4,230.72
ZEEM000	Cintas Corporation	Check	122667	\$ 392.67
CITY000	City Employees Associates	Check	122668	\$ 25.00
VICT003	CITY OF VICTORVILLE / SANITATION	Check	122669	\$ 4,234.11
DESE005	DESERT PUMPS & PARTS, INC.	Check	122670	\$ 6,649.31
DONE001	Done-Right Concrete Construction Services Inc.	Check	122671	\$ 1,777.00
FLYE000	Flyers Energy, LLC	Check	122672	\$ 1,170.23
GAOS000	G.A. OSBORNE PIPE & SUPPLY	Check	122673	\$ 1,550.90
HESPO05	HESPERIA UNIFIED SCHOOL DISTRICT	Check	122674	\$ 348.17
HIDE000	HI-DESERT COMMUNICATIONS	Check	122675	\$ 100.00
BIRD000	Larry Bird	Check	122676	\$ 100.00
LEAR000	LEARN CPR 4 LIFE	Check	122677	\$ 960.00
LUHD000	Luhdorff and Scalmanini Consulting Engineers, Inc.	Check	122678	\$ 7,638.25
ORKI000	ORKIN	Check	122679	\$ 1,351.14
PRUD001	PRUDENTIAL OVERALL SUPPLY	Check	122680	\$ 2,179.50
ROBE002	Robertson's Ready Mix, Ltd	Check	122681	\$ 922.34
ROYA000	ROYAL WHOLESALE ELECTRIC	Check	122682	\$ 1,551.41
SANB007	SAN BERNARDINO COUNTY FIRE PROTECTION DIST	Check	122683	\$ 840.00
NASS000	SCOTT NASSIF	Check	122684	\$ 100.00
THUR000	Thurlow's Heating & A/C Inc.	Check	122685	\$ 22,957.65
TOWN001	TOWN & COUNTRY TIRE	Check	122686	\$ 682.79
APPL007	TOWN OF APPLE VALLEY	Check	122687	\$ 125.90
UNIT000	UNITED RENTALS NORTHWEST, INC	Check	122688	\$ 3,046.35
VERI004	VERIZON WIRELESS	Check	122689	\$ 2,394.64
CSRM000	CSRMA	Check	122690	\$ 213,359.00
HIGH001	HIGH DESERT LASER GRAPHICS	Check	122691	\$ 136.85
SWRC000	SWRCB	Check	122692	\$ 150.00
ADPO01	A.D.P.	Check	122693	\$ 240.05
APPL015	Apple Valley Transfer & Storage dba Shredyourdocs.com	Check	122694	\$ 45.00
APPL004	APPLIED INDUSTRIAL TECHNOLOGIES	Check	122695	\$ 4,958.85
ATMO000	ATMOSPHERIC ANALYSIS AND CONSULTING, INC	Check	122696	\$ 1,890.00
CONC000	CONCORDE COMMUNICATIONS	Check	122697	\$ 104.00
DAIL000	DAILY PRESS	Check	122698	\$ 4,812.08
JONE003	Debra Jones	Check	122699	\$ 100.00
KONI000	KONICA MINOLTA BUSINESS SOLUTIONS	Check	122700	\$ 487.38
APPL000	LIBERTY UTILITIES- APPLE VALLEY RANCHOS WATER	Check	122701	\$ 91.90
PRUD001	PRUDENTIAL OVERALL SUPPLY	Check	122702	\$ 1,646.44
SPAR000	SPARKLETTS DRINKING WATER	Check	122703	\$ 875.82
STEE000	Steel Unlimited, Inc.	Check	122704	\$ 1,738.49
APPL007	TOWN OF APPLE VALLEY	Check	122705	\$ 171.68
RANC000	Victorville Chevrolet	Check	122706	\$ 959.35
APPL004	APPLIED INDUSTRIAL TECHNOLOGIES	Check	122707	\$ 53.01
BHPH000	B & H PHOTO	Check	122708	\$ 1,129.02
CED0000	CED	Check	122709	\$ 10,198.54
FLYE000	Flyers Energy, LLC	Check	122710	\$ 1,201.14
HESPO00	HESPERIA HOSE SUPPLY	Check	122711	\$ 1,887.78
NAPA000	NAPA VICTORVILLE	Check	122712	\$ 150.83
ORKI000	ORKIN	Check	122713	\$ 150.00
ROYA000	ROYAL WHOLESALE ELECTRIC	Check	122714	\$ 10,898.24
BRIT000	Sulzer Electro-Mechanical Services (US) Inc.	Check	122715	\$ 1,521.43
THUR000	Thurlow's Heating & A/C Inc.	Check	122716	\$ 3,734.40
BNSF001	BNSF RAILWAY COMPANY	Check	122718	\$ 26,602.00
cali013	CALIFORNIA MUNICIPAL STATISTICS INC	Check	122719	\$ 95.00
CSRM000	CSRMA	Check	122720	\$ 24,749.40
SENT000	DAN SENTMAN	Check	122721	\$ 224.41
ANTH000	DONNA ANTHONY	Check	122722	\$ 435.00
Total Checks				\$ 424,521.13

Victor Valley Wastewater Reclamation Authority
Cash Disbursement Register
From 8/1/19 through 8/31/19

Vendor #	Vendor Name	Type	Payment #	Total
AMER006	AMERICAN EXPRESS	Bank Draft	0042710-1	\$ 218.20
GRAI000	GRAINGER	Bank Draft	0042710-10	\$ 385.92
GRAI000	GRAINGER	Bank Draft	0042710-10	\$ 218.85
GRAI000	GRAINGER	Bank Draft	0042710-10	\$ 44.90
HAAK000	HAAKER EQUIPMENT COMPANY	Bank Draft	0042710-11	\$ 5,475.00
HACH000	HACH COMPANY	Bank Draft	0042710-12	\$ 4,430.68
LARR000	LARRY WALKER ASSOCIATES	Bank Draft	0042710-13	\$ 745.00
MMA000	MC MASTER-CARR SUPPLY CO.	Bank Draft	0042710-14	\$ 242.70
PATT001	PATTON SALES CORP	Bank Draft	0042710-15	\$ 940.66
QUIN001	Quincy Compressor	Bank Draft	0042710-16	\$ 466.24
QUIN002	Quinn Company	Bank Draft	0042710-17	\$ 1,007.79
SIEM003	SIEMENS INDUSTRY INC.	Bank Draft	0042710-17	\$ 6,005.99
TELE000	TELEDYNE ISCO, INC.	Bank Draft	0042710-18	\$ 1,730.47
TESC000	Tesco Controls Inc	Bank Draft	0042710-19	\$ 5,950.00
BECK000	BECK OIL, INC.	Bank Draft	0042710-2	\$ 2,509.00
BECK000	BECK OIL, INC.	Bank Draft	0042710-2	\$ 2,375.40
BECK000	BECK OIL, INC.	Bank Draft	0042710-2	\$ 21.05
TYLE000	Tyler Technologies, Inc	Bank Draft	0042710-20	\$ 29,939.73
USAB000	U.S.A. BLUEBOOK	Bank Draft	0042710-21	\$ 480.51
USAB000	U.S.A. BLUEBOOK	Bank Draft	0042710-21	\$ 463.34
USAB000	U.S.A. BLUEBOOK	Bank Draft	0042710-21	\$ 224.10
USAB000	U.S.A. BLUEBOOK	Bank Draft	0042710-21	\$ 181.04
USBA000	U.S. BANK	Bank Draft	0042710-22	\$ 6,722.53
VVWE000	Victor Valley Wastewater Employees Assoc	Bank Draft	0042710-23	\$ 575.00
WAXI000	WAXIE SANITARY SUPPLY	Bank Draft	0042710-24	\$ 474.65
WEST000	WEST COAST SAFETY SUPPLY	Bank Draft	0042710-25	\$ 1,936.27
WEST000	WEST COAST SAFETY SUPPLY	Bank Draft	0042710-25	\$ 1,612.88
WEST000	WEST COAST SAFETY SUPPLY	Bank Draft	0042710-25	\$ 1,545.00
WEST000	WEST COAST SAFETY SUPPLY	Bank Draft	0042710-25	\$ 446.50
XYLE001	Xylem Water Solutions	Bank Draft	0042710-26	\$ 1,853.86
BEST000	BEST, BEST & KRIEGER, L.L.P.	Bank Draft	0042710-3	\$ 11,643.76
BEST000	BEST, BEST & KRIEGER, L.L.P.	Bank Draft	0042710-3	\$ 9,405.62
BEST000	BEST, BEST & KRIEGER, L.L.P.	Bank Draft	0042710-3	\$ 5,410.80
BEST000	BEST, BEST & KRIEGER, L.L.P.	Bank Draft	0042710-3	\$ 2,721.60
BEST000	BEST, BEST & KRIEGER, L.L.P.	Bank Draft	0042710-3	\$ 2,462.40
BEST000	BEST, BEST & KRIEGER, L.L.P.	Bank Draft	0042710-3	\$ 2,041.20
BEST000	BEST, BEST & KRIEGER, L.L.P.	Bank Draft	0042710-3	\$ 1,846.80
BEST000	BEST, BEST & KRIEGER, L.L.P.	Bank Draft	0042710-3	\$ 226.80
BEST000	BEST, BEST & KRIEGER, L.L.P.	Bank Draft	0042710-3	\$ 129.60
BEST000	BEST, BEST & KRIEGER, L.L.P.	Bank Draft	0042710-3	\$ 1.44
BLAC003	Blackline Safety Corp	Bank Draft	0042710-4	\$ 210.00
BREN001	BRENNTAG PACIFIC, INC	Bank Draft	0042710-5	\$ 12,327.43
BREN001	BRENNTAG PACIFIC, INC	Bank Draft	0042710-5	\$ 905.64
CARO000	CAROLLO ENGINEERS, A PROFESSIONAL CORPORATION	Bank Draft	0042710-6	\$ 27,329.16
CARO000	CAROLLO ENGINEERS, A PROFESSIONAL CORPORATION	Bank Draft	0042710-6	\$ 5,541.60
CONS000	CONSUMERS PIPE & SUPPLY, CO.	Bank Draft	0042710-7	\$ 3,429.90
CONS000	CONSUMERS PIPE & SUPPLY, CO.	Bank Draft	0042710-7	\$ 568.98
EVOQ000	EvoQua Water Technologies LLC	Bank Draft	0042710-8	\$ 9,056.17
GIER000	GIERLICH MITCHELL, INC.	Bank Draft	0042710-9	\$ 7,558.32
ADAM000	Brad Adams	Bank Draft	0042711-1	\$ 596.42
SCOT000	CASTEEL, KRISTI	Bank Draft	0042711-3	\$ 39.26
ADAM000	Brad Adams	Bank Draft	0043220-1	\$ 255.00
LAAR000	LATIF LAARI	Bank Draft	0043220-2	\$ 247.08
WILS000	Emily Wilson	Bank Draft	0043220-3	\$ 119.55
SCOT000	CASTEEL, KRISTI	Bank Draft	0043623	\$ 81.75
AMER006	AMERICAN EXPRESS	Electronic Fund Transfer	0043624-1	\$ 79.99
USAB000	U.S.A. BLUEBOOK	Electronic Fund Transfer	0043624-10	\$ 386.94
DAVI003	DAVIS ELECTRIC, INC	Electronic Fund Transfer	0043624-2	\$ 10,902.00
GRAI000	GRAINGER	Electronic Fund Transfer	0043624-3	\$ 7,966.96

**Victor Valley Wastewater Reclamation Authority
Cash Disbursement Register
From 8/1/19 through 8/31/19**

Vendor #	Vendor Name	Type	Payment #	Total
MCMA000	MC MASTER-CARR SUPPLY CO.	Electronic Fund Transfer	0043624-4	\$ 2,972.88
PROC002	Process Instruments & Controls, LLC	Electronic Fund Transfer	0043624-5	\$ 453.45
QUIN002	Quinn Company	Electronic Fund Transfer	0043624-6	\$ 3,460.36
SIEM003	SIEMENS INDUSTRY INC.	Electronic Fund Transfer	0043624-7	\$ 592.63
TYLE000	Tyler Technologies, Inc	Electronic Fund Transfer	0043624-8	\$ 7,495.97
USBA000	U.S. BANK	Electronic Fund Transfer	0043624-9	\$ 7,720.96
DELO000	Deloach & Associates, Inc	Electronic Fund Transfer	0043740-2	\$ 18,383.60
ILIN000	iLink Business Management	Electronic Fund Transfer	0043740-3	\$ 1,319.40
BILL002	BILLINGS, RICHARD	Bank Draft	0044169-1	\$ 435.00
MAIN000	RANDY MAIN	Bank Draft	0044169-10	\$ 435.00
DAGIN000	ROY DAGNINO	Bank Draft	0044169-11	\$ 435.00
FLIN000	TERRIE GOSSARD FLINT	Bank Draft	0044169-12	\$ 258.83
HINO000	THOMAS HINOJOSA	Bank Draft	0044169-13	\$ 435.00
DAVI001	TIM DAVIS	Bank Draft	0044169-14	\$ 435.00
GYUR000	DARLINE GYURCSIK	Bank Draft	0044169-2	\$ 224.41
GILL001	GILLETTE, RANDY	Bank Draft	0044169-3	\$ 435.00
NALI000	L. CHRISTINA NALLAN	Bank Draft	0044169-4	\$ 435.00
MONT000	LILLIE MONTGOMERY	Bank Draft	0044169-5	\$ 163.37
MCGE000	MARK MCGEE	Bank Draft	0044169-6	\$ 435.00
NAVE000	NAVE, PATRICK	Bank Draft	0044169-7	\$ 435.00
KENI000	OLIN KENISTON	Bank Draft	0044169-8	\$ 258.83
JOHN004	PATRICIA J JOHNSON	Bank Draft	0044169-9	\$ 187.74
DONE000	Bradley Doneff	Bank Draft	004711-2	\$ 156.23
PRIN000	PRINCIPAL LIFE INS. CO.	Electronic Fund Transfer	043487	\$ 9,749.57
CHAR001	CHARTER COMMUNICATIONS	Bank Draft	081319CHAR	\$ 4,865.45
SOUT006	SOUTHWEST GAS COMPANY	Bank Draft	081319SWG	\$ 330.09
UPS0000	UPS	Bank Draft	081319UPSA	\$ 357.78
UPS0000	UPS	Bank Draft	081319UPSB	\$ 40.26
UPS0000	UPS	Bank Draft	081319UPSC	\$ 18.32
LINC000	Lincoln Financial Group	Bank Draft	19217112	\$ 3,598.03
LINC000	Lincoln Financial Group	Bank Draft	19217113	\$ 74.66
KSST000	KS Statebank	Electronic Fund Transfer	20002	\$ 103,791.20
MCGR000	MCGRATH RENTCORP	Electronic Fund Transfer	20003	\$ 10,080.22
ADSC000	A.D.S. Corp.	Electronic Fund Transfer	20004	\$ 7,800.00
BIOG001	Biogas Engineering	Electronic Fund Transfer	20005	\$ 2,250.00
DAVI003	DAVIS ELECTRIC, INC	Electronic Fund Transfer	20006	\$ 72,000.00
GRAY000	Graybar Electric Co., Inc.	Electronic Fund Transfer	20007	\$ 502.74
HOWD000	Howden Roots, LLC	Electronic Fund Transfer	20008	\$ 1,316.71
MCMA000	MC MASTER-CARR SUPPLY CO.	Electronic Fund Transfer	20009	\$ 626.56
TMOB000	T-Mobile	Electronic Fund Transfer	20010	\$ 119.00
USAB000	U.S.A. BLUEBOOK	Electronic Fund Transfer	20011	\$ 96.10
CSAM000	C.S. AMSCO	Electronic Fund Transfer	20012	\$ 506.08
CRAN000	CRANE PRO SERVICES	Electronic Fund Transfer	20013	\$ 1,290.00
KONI000	KONICA MINOLTA BUSINESS SOLUTIONS	Bank Draft	921159	\$ 734.73
SOUT000	Southern California Edison	Bank Draft	9686217931	\$ 66,638.16
			Total ACH and EFTs	\$ 537,064.75

APPROVED
 09/11/19

Total Checks	\$ 424,521.13
Total ACH and EFT	\$ 537,064.75
Total Payroll - August 2019	\$ 322,131.18
Total	\$ 1,283,717.06

**MINUTES OF A REGULAR MEETING
REGULAR MEETING OF THE BOARD OF COMMISSIONERS
VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY (VWVRA)**

August 15, 2019

CALL TO ORDER: Chair Scott Nassif called the meeting to order at 7:53 AM; in Conference Room D at Victorville City Hall, located at 14343 Civic Drive, Victorville California, with the following members present:

**TOWN OF APPLE VALLEY
CITY OF VICTORVILLE
CITY OF HESPERIA
ORO GRANDE (CSA 42) AND
SPRING VALLEY LAKE (CSA 64)**

**Scott Nassif, Chair
Debra Jones, Vice-Chair
Bill Holland, Secretary
Robert Lovingood, Treasurer**

VWVRA Staff and Legal Counsel:

**Brian Macy, Interim General Manager
Kristi Casteel, Secretary to GM/Board
Piero Dallarda, Legal Counsel (BB&K)
Chieko Keagy, Controller**

**David Wylie, Safety & Communications Officer
Xiewi Wang, Senior Accountant
Robert Townsend, Regulatory Inspector
Alton Anderson, Construction Manager**

Others Present:

**Doug Robertson Apple Valley
Nils Bentsen, City of Hesperia
Keith Metzler, City of Victorville
Brian Gengler, City of Victorville**

**Sanjay Gaur, Raftelis
George Harris, City of Victorville
Carl Coleman, Mojave Water Agency
Robert DeLoach, DeLoach & Associates**

CLOSED SESSION

PUBLIC COMMENTS- CLOSED SESSION AGENDA

Chair Nassif asked if there were any comments from the public regarding any item on the Closed Session Agenda. Hearing none, Chair Nassif called for a motion to enter into Closed Session.

Commissioner Holland made a motion to enter into Closed Session. Seconded by Commissioner Jones.

REGULAR SESSION

CALL TO ORDER & PLEDGE OF ALLEGIANCE

Chair Nassif called the meeting to order at 9:51 AM.

REPORT FROM CLOSED SESSION

Nothing to report

PUBLIC COMMENTS- REGULAR SESSION AGENDA

None

ANNOUNCEMENTS AND CORRESPONDENCE:

6. Possible conflict of interest issues

Chair Nassif will be abstaining from any disbursements to Napa Auto Parts on item 8

7. General Manager's Update

Interim Manager Macy gave a brief update on VVWRA projects

CONSENT CALENDAR:

8. Approve July 2019 Disbursement Registers

9. Approve Minutes from the July 18, 2019 Regular Meeting

Commissioner Jones made a motion to approve the consent calendar, seconded by Commissioner Lovingood and approved by roll call vote with Chair Nassif abstaining from any disbursements to Napa Auto Parts and Commissioner Holland and Commissioner Lovingood abstaining from item 9.

Chair Nassif: Yes

Commissioner Jones: Yes

Commissioner Holland: Yes

Commissioner Lovingood: Yes

REPORTS & PRESENTATIONS:

10. Rate Study- Raftelis

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Raftelis gave a presentation on the rate study. The Board asked Raftelis to send them back up documentation to see the different scenarios and to see how those scenarios would affect the ending balance.

PUBLIC HEARING:**11. First Reading of Ordinance 001**

Chair Nassif opened the Public Hearing at 10:24 AM and read the Ordinance by name and title.

The Secretary of the Board confirmed the posting and publication of the Hearing Notice as required by law.

There was a brief presentation by Interim Manger Macy

Chair Nassif asked if there were any comments from the public. There were no public comments.

Chair Nassif closed the public hearing at 10:33 am and Piero Dallarda informed the Board that action did not need to be taken but that this was confirmation to schedule the second public hearing.

ACTION & DISCUSSION ITEMS:**12. Recommendation to Approve Release of Bid for PLC's Replacement Project**

Commissioner Jones made a motion to approve the recommendation, seconded by Commissioner Holland and approved by roll call.

Chair Nassif: Yes

Commissioner Jones: Yes

Commissioner Holland: Yes

Commissioner Lovingood: Yes

13. Recommendation to Approve Sole Source Replacement of Blowers 2, 3 and Master PLC

Commissioner Lovingood made a motion to approve the recommendation, seconded by Commissioner Jones and approved by roll call.

Chair Nassif: Yes

Commissioner Jones: Yes

VVWRA Regular Meeting Minutes
Thursday August 15, 2019
Page 4

Commissioner Holland: Yes

Commissioner Lovingood: Yes

STAFF/PROFESSIONAL SERVICES REPORTS:

- 14. Financial and Investment Report – July 2019**
- 15. Operations & Maintenance Report – July 2019**
- 16. Environmental Compliance Department Reports – July 2019**
- 17. Septage Receiving Facility Reports – July 2019**
- 18. Safety & Communications Report – July 2019**

NEXT VVWRA BOARD MEETING:

Thursday, September 19, 2019 - Regular Meeting of the Board of Commissioners

FUTURE AGENDA ITEMS

USDA Loan and Grant for the Oro Grand Interceptor Project

Second Public Hearing for Ordinance 001

COMMISSIONER COMMENTS

CLOSED SESSION (If Closed Session is continued)

ADJOURNMENT

APPROVAL:

DATE: September 19, 2019 **BY:**

 Approved by VVWRA Board Larry Bird,
 Secretary VVWRA Board of Commissioners



VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY
Report/Recommendation to the General Manager
September 19, 2019

FROM: Brian Macy, Interim General Manager

TO: Board of Commissioners

SUBJECT: Plant Superintendent Contract

RECOMMENDATION

It is recommended that the Board of Commissioners approve the agreement for the Plant Superintendent position.

REVIEWED BY

This recommendation was reviewed by Piero Dallarda, Legal Counsel and Cynthia Germano Human Resource Legal Counsel.

BACKGROUND INFORMATION

The Plant Superintendent position, job description and corresponding salary range was approved by the VVWRA Board in 2018. An unsuccessful recruitment for the position ended in December 2018. The position remained unfilled and its duties performed by VVWRA staff with the help of an outside consultant since May 2019. With the hiring of this position, the Chief Plant Operator and Chief Reporting duties will be transferred to the Plant Superintendent and the outside consultant services will no longer be needed.

FINANCIAL IMPACT

Plant Superintendent position will replace the Operations & Maintenance Manager position and the outside consultant services contact; therefore, no increase in cost is expected.

RELATED IMPACT

None

**EMPLOYMENT AGREEMENT BETWEEN VICTOR VALLEY WASTEWATER
RECLAMATION AUTHORITY AND BRAD ADAMS**

This EMPLOYMENT AGREEMENT ("Agreement") is made by and between BRAD ADAMS ("Adams") and the Board of Commissioners of the VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY, a joint powers authority ("Authority"), hereinafter also referred to as "Board of Commissioners." The Parties hereto agree as follows:

Section 1. Employment.

1.1 The Board of Commissioners agrees to employ Adams in the position of Plant Superintendent for a three (3) year term, and Adams agrees and does accept employment in the position of Plant Superintendent for a three (3) year term upon the terms and conditions set forth herein.

1.2 Adams agrees to perform the functions and duties of the position of Plant Superintendent as specified in the job description set forth in Exhibit "A," attached hereto and incorporated herein by this reference, and any other functions or duties as may be established or directed by the Authority General Manager ("General Manager"). Adams agrees to perform all such functions and duties to the best of his ability and in an efficient and competent manner.

Section 2. Term of the Agreement.

2.1 This Agreement shall be for a term of three (3) years, beginning September 23, 2019 and ending September 23, 2022. Subject to the Authority's right to terminate this Agreement and Adams's employment at any time pursuant to Section 3. of this Agreement, this Agreement shall automatically be renewed for subsequent one (1) year periods unless the Authority provides written notice to Adams no less than six (6) months prior to the expiration of the current term or an extended term that the Agreement will be terminated. Unless otherwise provided for by a subsequent written agreement between the Parties, the terms and conditions of this Agreement shall apply to any extended term of this Agreement.

2.2 Nothing in this Agreement shall prevent, limit or otherwise interfere with the right of General Manager to terminate the services of Adams at any time, subject only to the provisions set forth in this Agreement.

2.3 Nothing in this Agreement shall prevent, limit or otherwise interfere with the right of Adams to resign at any time from his position with the Authority, subject only to the provisions set forth in this Agreement.

2.4 Adams agrees to remain in the exclusive employment of the Authority during the term of this Agreement, and he shall neither accept other employment or become employed by any other person, business, or organization during the term of this Agreement. As used in this section, the term "employed" shall not be construed to include occasional teaching, writing, or consulting on Adams's time off, which may be undertaken by Adams with the express written consent of General Manager.

2.5 Except as otherwise specified herein, Adams is subject to the Authority's Personnel Rules and Regulations.

Section 3. Termination and Severance Pay.

3.1 Adams serves at the will and pleasure of General Manager and may be terminated with or without cause at any time. Consequently, nothing in this Agreement shall in any way affect General Manager's right to terminate the employment of Adams and this Agreement on an at will basis, with or without cause, at any time, as provided herein.

3.2 In the event Adams's employment and this Agreement are terminated without cause, Authority agrees to provide Adams with severance pay as a lump sum cash payment equal to nine (9) months base salary, including any annual adjustment, less deductions required by law. Also, in addition to the lump sum payment, Authority shall provide for continuance of Authority portion of Adams's health insurance benefits provided herein for nine (9) months from and after the date of termination or until Adams finds other employment, whichever occurs first.

3.3 In the event Adams is terminated for cause, Adams shall not be entitled to any severance pay or continued benefits. Termination for cause is defined as follows:

- (a) A willful breach of this Agreement.
- (b) Habitual neglect of duties required to be performed under this Agreement.
- (c) Any acts of dishonesty, fraud, misrepresentation or other acts of moral turpitude.
- (d) Refusal or failure to act in accordance with any specific written directive or order of the General Manager.

3.4 In the event that Adams is terminated for cause, Adams will be presented with written notice of the basis for said cause. Upon receipt of said written notice, Adams, within five (5) business days, may request a hearing before the Board of Commissioners. The issue at the hearing shall be limited solely to whether or not there is sufficient evidence to support a finding of termination for cause such that Adams would not be entitled to any severance pay and benefits. Under no circumstances shall Adams be entitled to reinstatement as a result of such hearing.

3.5 Nothing in this Agreement shall prevent, limit or otherwise interfere with the right of Adams to voluntarily resign at any time from his position with Authority, subject only to the provisions set forth in this Agreement. In the event Adams desires to voluntarily resign from his position with Authority, Adams shall provide General Manager thirty (30) days' notice in advance, unless the Parties agree otherwise. In the event Adams voluntarily resigns, he shall not be entitled to any severance pay or benefits, but Authority shall pay Adams for accrued vacation benefits.

3.6 Notwithstanding any other provision herein, in accordance with Government Code Section 53260, the cash payment that Adams may receive in the event of the termination

of this Agreement, as set forth in Section 3.2 above, shall not exceed an amount equal to the monthly base salary of Adams multiplied by the number of months left on the unexpired term of this Agreement.

Section 4. Salary and Expenses.

4.1 Authority agrees to pay Adams for his services rendered a base salary of \$130,520.00 (\$5,020 bi-weekly) in installments at the same time as other employees of the Authority are paid, commencing September 23, 2019. The current approved annual salary range is \$130,520.00 - \$159,016.00 (Salary Range No 111). Adams will be eligible to receive step increases in conjunction with his annual performance review. Adams's base salary shall be increased annually beginning on July 1, 2020, by the same percentage increase published as the calendar year average Consumer Price Index for All Urban Consumers in the Los Angeles- Anaheim-Riverside area.

4.2 Except for the use of his personal vehicle for the performance of his duties, for which a vehicle allowance is provided under Section 5.8 of this Agreement, Authority shall reimburse Adams within its budget and upon approval of General Manager for all actual and necessary expenses incurred in connection with the performance of his official duties. Adams agrees to maintain and submit accurate records of all expenses for which reimbursement is claimed.

Section 5. Benefits.

5.1 Vacation. Adams shall receive and use vacation benefits under the same terms and conditions applicable to Authority employees generally.

5.2 Administrative Leave. Adams shall accrue paid administrative leave at a rate of one (1) week per year, commencing on September 23, 2019. Adams may use administrative leave for personal business and/or other personal reasons. Notwithstanding the above, administrative leave is subject to a maximum accrual cap of three (3) weeks.

5.3 Retirement. Authority agrees to provide for participation in and pay all Employer and Employee contributions in the California Public Employees Retirement System (PERS) described as 2.5% at 55, not integrated with social security, or if unavailable, an equivalent retirement program. In addition, and except as provided hereinafter, the Authority shall make a deferred compensation contribution on Adams's behalf equal to three percent (3%) of Adams's base salary, including annual increases, and such amount shall be compensated in addition to the base salary. Said contribution shall be deposited at each pay period to Adams's designated deferred compensation account administered by the Authority for all employees.

5.4 Disability, Health, and Life Insurance. Authority agrees to keep in force and to make required premium payments for Adams for insurance policies covering Adams and his dependents, the same as are provided to all general employees of the Authority under the Authority's Personnel Rules and Regulations. After purchasing Adams's group health, dental, and vision choices, any balance remaining from the monthly allowance may be paid, at Adams's discretion, to Adams as salary. Should the medical choices exceed the monthly allowance, the

excess will be deducted from Adams's monthly payroll check. Authority agrees to purchase and to pay the required premium on a term life insurance policy in an amount equal to twice Adams's annual salary. Authority also agrees to purchase and to pay the required premium on short-term and long-term disability insurance the same as are provided to all general employees of Authority under Authority's Personnel Rules and Regulations. If required by the insurance provider, Adams agrees to submit once per calendar year to a complete physical examination by a qualified physician of his choice, the cost of which shall be paid by Authority. Authority agrees to maintain Adams's medical records in confidence.

5.5 Dues, Subscription and License Fees. To the extent Authority's approved annual budget designates sufficient funds for the purposes identified in this section, Authority agrees to pay for the professional dues and subscriptions necessary for Adams's continued and full participation in national, state, regional and local associations and organizations necessary and desirable for his continued professional participation, growth and advancement, and for the good of Authority.

5.6 Professional Development. To the extent Authority's approved annual budget designates sufficient funds for the following purposes, Authority agrees to pay registration fees and travel subsistence expenses of Adams for professional and official travel, meetings, and occasions adequate to continue the professional development of Adams and to adequately pursue necessary official business and other functions for Authority. Upon the prior approval of General Manager, Authority also agrees to pay for related tuition, fees, and travel and subsistence expenses of Adams for educational degree programs, short courses, institutes, and seminars that are necessary for his professional development and the good of Authority.

5.7 Other Leave. Adams shall accrue sick leave and shall be provided with holiday leave and bereavement leave as are provided to other employees of Authority under Authority's Personnel Rules and Regulations.

5.8 Vehicle Allowance. Adams shall provide his own vehicle to be used in the performance of his duties, and Authority shall provide an automobile allowance of five hundred dollars (\$500.00) per month for said use unless General Manager chooses to allow the use of a company vehicle. Adams shall be responsible for paying for liability insurance as required by State law, fuel, maintenance, repair of his vehicle and other costs associated with the ownership and use of his own personal vehicle.

Section 6. Performance Evaluation.

Authority shall review and evaluate the performance of Adams each year within thirty (30) days prior to this Agreement's anniversary date. Said review and evaluation shall be conducted by General Manager. The evaluation process shall include, but not be limited to, use of "360 evaluations." Adams's salary and benefits may be reviewed annually and adjusted by General Manager for performance, merit or longevity pursuant to Authority's established pay schedule for the position. Adams's salary may not, however, exceed the highest step in the

established pay schedule. Accordingly, if Adams's salary reaches the highest step in the pay schedule, it shall be capped at that amount.

Section 7. Bonding.

Authority shall bear the full costs of any fidelity or other bonds required of Adams under any law or ordinance.

Section 8. General Provisions.

8.1 This Agreement supersedes any and all other agreements, either oral or written, between the parties hereto with respect to the employment of Adams by Authority, and contains all of the covenants and agreements between the parties with respect to the employment of Adams by Authority.

8.2 Each party agrees and acknowledges that no representations, inducements, promises, or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party, which are not embodied herein and that any agreement, statement, or promise not contained in this Agreement shall not be valid or binding on either party.

8.3 Any modification of this Agreement will be effective only if made in writing and signed by both Adams and Authority.

8.4 If any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remaining provisions shall nevertheless continue in full force and effect without being impaired or invalidated in any way.

8.5 This Agreement shall be governed by and construed in accordance with the law of the State of California.

8.6 This Agreement shall be construed as a whole, according to its fair meaning, and not in favor or against any party. By way of example and not in limitation, this Agreement shall not be construed in favor of the party receiving a benefit nor against the party responsible for any particular language in this Agreement.

8.7 Adams acknowledges that he has had the opportunity to consult legal counsel in regard to this Agreement, that he has read and understands this Agreement, that he is fully aware of its legal effect, and that he has entered into it freely and voluntarily and based on his own judgment and not on any representations or promises other than those contained in this Agreement.

[SIGNATURES]

Dated: 9-12-19

By: 
Brad Adams

VICTOR VALLEY WASTEWATER
RECLAMATION AUTHORITY

Dated: _____

By: _____
General Manager

APPROVED AS TO FORM

By: _____
Piero Dallarda of Best Best & Krieger LLP
General Counsel



VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY
Report/Recommendation to the Board of Commissioners

September 19, 2019

FROM Brian Macy, Interim General Manager
TO Board of Commissioners
SUBJECT Adoption of Resolution 2019-14 Adopting the 2019 Financial Plan

RECOMMENDATION

It is recommended that the Board of Commissioners adopt Resolution 2019-14 adopting the 2019 Wastewater Rate Study and Connection Fee Update prepared by Raftelis.

REVIEW BY OTHERS

This recommendation was reviewed by Piero Dallarda, Legal Counsel

BACKGROUND INFORMATION

The Member Agencies, Board and VVWRA staff have been meeting since April of this year to discuss the financing of VVWRA's reoccurring operational and maintenance expenses and Capital Improvement Program. A thorough investigation of; rising electrical and other operations costs, impacts of increased regulatory requirements, the operation of both sub-regional treatment plants, and existing interceptor system deficiencies was completed to determine the allocation of expenses between existing users and growth. Below is a timeline of Board presentations and discussions:

- These findings were first during the Board Meeting held on May 16, 2019.
- At the June 20, 2019 Board Meeting, it was the consensus of the Board to move forward with an 8% user charge adjustment.
- The fiscal year 2019-2020 budget was adopted on July 18, 2019 with revenue projections based on an 8% user charge increase and an increase of connection fees from \$4,000/Equivalent Density Unit (EDU) to \$4,679/EDU.
- During the Raftelis presentation provided during the August 15, 2019 Board Meeting, additional information was requested by the Board and provided by VVWRA Staff which shows the impact of one-time payments related to uncollected revenue over the next two fiscal years.

The results of those discussions are reflected in the attached 2019 Wastewater Rate Study and Connection Fee Update.

FINANCIAL IMPACT

The 2019 Wastewater Rate Study and Connection Fee Update is used to determine the applicable rates which are cited in Ordinances 001 and 002.

RELATED IMPACTS

An adopted Financial Plan and Capacity Fee Study is necessary to amend ordinances and secure grants or loans to construct projects listed in the Capital Improvement Program (CIP).

RESOLUTION NO. 2019-14**A RESOLUTION OF THE VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY TO APPROVE AND ADOPT A FINANCIAL PLAN UPDATE PREPARED BY RAFTELIS**

WHEREAS, the Victor Valley Wastewater Reclamation Authority (“Authority”) is a Joint Powers Authority and Public Agency of the State of California established in 1978 that provides Regional wastewater treatment to a designated Service Area; and

WHEREAS, an amendment to the Victor Valley Regional Wastewater Service Agreement was made and entered into as of August 1, 2005, by and between the Authority and the City of Victorville, the City of Hesperia, the Town of Apple Valley, and the County of San Bernardino Service Areas No. 42 (Oro Grande) and No. 64 (Spring Valley Lake), collectively referred to as “Member Entities”; and

WHEREAS, the Authority provides wastewater treatment service to the Member Entities and issues monthly flow billings to the Member Entities based upon the number of gallons of flow received from each Entity; and

WHEREAS, a Financial Plan was prepared by prepared by Black & Veatch at the request of the Member Entities in 2014 in order to provide accurate and reliable financial planning information to the Authority for Capital Improvement projects; and

WHEREAS, an updated Financial Plan (a.k.a 2019 Wastewater Rate Study and Connection Fee Update) was prepared by Raftelis at the request of the Member Entities in 2017 in order to provide accurate and reliable financial planning information to the Authority for its current Capital Improvement projects.

WHEREAS, the updated Financial Plan by Raftelis also suggested different options for VVWRA to modify its rates to meet its operations and maintenance expenses and the Board of Commissioners was presented with those options,

NOW, THEREFORE, BE IT RESOLVED that the Commission of the Victor Valley Wastewater Reclamation Authority does hereby receive, approve and adopt the 2019 Financial Plan Update, attached hereto as “Exhibit A”, as prepared by Raftelis.

RECEIVED, APPROVED AND ADOPTED on this 19th day of September 2019.

Scott Nassif, Chair
VVWRA Board of Commissioners

APPROVED AS TO FORM:

Piero C. Dallarda of
Best Best & Krieger LLP

Larry Bird, Secretary
VVWRA Board of Commissioners

CERTIFICATION

I do hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the Board of Commissioners held on September 19, 2019.

Kristi Casteel
Secretary to the Board of Commissioners

EXHIBIT A

Resolution 2019-14

VICTOR VALLEY

WASTEWATER RECLAMATION AUTHORITY

2019 Wastewater Rate Study and Connection Fee Update

Final Report / August 19, 2019





August 19, 2019

Chieko Keagy
 Controller
 Victor Valley Wastewater Reclamation Authority
 20111 Shay Road
 Victorville, CA 92394

Subject: 2019 Wastewater Rate Study and Connection Fee Update Report

Dear Ms. Keagy,

Raftelis is pleased to provide this 2019 Wastewater Rate Study and Connection Fee Update Report for the Victor Valley Wastewater Reclamation Authority (Authority). The contents of this Report include a financial plan for the Authority for fiscal year (FY) 2020 to FY 2024, proposed user charges over the same timeframe, as well as updated connection fees.

The major objectives of the study include the following:

- » Develop a five-year financial plan through FY 2024 to ensure financial sufficiency, meet operating costs, ensure sufficient funding to meet debt obligations, and fund necessary capital expenditures
- » Propose updated user charge rates for FY 2020 to FY 2024
- » Update the prior connection fee calculation methodology and develop proposed connection fees that are justifiable and fair to both new and existing users of the Authority's wastewater system.

This Report summarizes the key findings and recommendations related to the development of the financial plan, the associated user charges, and the updated connection fee. It has been a pleasure working with you and we thank you, Xiwei Wang, and other Authority staff for the support provided during this study.

Sincerely,

RAFTELIS FINANCIAL CONSULTANTS, INC.

Sanjay Gaur
 Vice President

Charles Diamond
 Consultant

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1. Executive Summary

1.1. Background of the Study

The Victor Valley Wastewater Reclamation Authority (Authority) is a Joint Power public agency of the State of California formed in 1977 to maintain compliance with the Federal Clean Water Act and to provide wastewater treatment within a 279 square mile service area in San Bernardino County. The primary function of the Authority is to receive and treat wastewater from the four member agencies listed below:

- » Town of Apple Valley
- » City of Hesperia
- » City of Victorville
- » County of San Bernardino Special District Service Areas No. 42 (Oro Grande) and No. 64 (Spring Valley Lake)

The Authority is governed by a Board of Commissioners that consists of four elected officials representing each member agency listed above. The Authority operates a Regional Wastewater Treatment Plant with 17 million gallons per day (MGD) of treatment capacity in the City of Victorville. Additionally, the Authority completed construction in April 2018 of two Sub-regional Wastewater Reclamation Plants with 1 MGD of treatment capacity each in the Town of Apple Valley and the City of Hesperia. Wastewater treated by the Authority is either discharged to the Mojave River or utilized as recycled water for irrigative use after undergoing an extensive cleaning and purification process.

The Authority engaged Raftelis in 2018 to conduct a wastewater rate study and connection fee update (Study). The purpose of the Study is to update the Authority's financial plan, user charges, and connection fees. User charges assessed per million gallons (MG) of billed wastewater flows and one-time connection fees assessed per equivalent dwelling unit (EDU) of new development constitute the vast majority of the Authority's annual revenues. Therefore, both user charges and connection fees must be appropriately set to ensure the financial sufficiency of the Authority in manner that is equitable across member agencies.

The Authority last conducted a Financial Plan Update Study and Connection Fee Study in 2014. These prior studies established proposed user charges and connection fees through fiscal year (FY) 2018.¹ Since these prior studies were completed in 2014, unanticipated circumstances have significantly impacted the Authority's financial situation. Firstly, the service area has experienced slower growth from new development than what was anticipated in the 2014 studies. Consequently, lower revenues from user charges and connection fees have been collected compared to projections from the prior financial plan. Additionally, a flow diversion by the City of Victorville and non-payment of connection fees by the City of Hesperia have critically impacted the Authority's financial situation in an adverse manner.

This Study was conducted in order to develop an updated financial plan that accounts for the aforementioned financial challenges which have emerged since the prior studies were conducted in 2014, and to develop updated user charges and connection fees that enhance the financial stability of the Authority. All analyses, results, and recommendations related to this Study are outlined in this Wastewater Rate Study and Connection Fee Update Report (Report).

¹ The Authority's fiscal year spans from July 1 of the prior calendar year to June 30 of the concurrent calendar year. For example, FY 2018 spanned from July 1, 2017 to June 30, 2018.

Given these considerations, the major objectives of this Study include the following:

1. Develop an updated five-year financial plan through FY 2024 to ensure financial sufficiency, meet operating costs, ensure sufficient funding to meet debt obligations, and fund necessary capital expenditures;
2. Develop proposed user charges rates for FY 2020 to FY 2024; and
3. Update the prior connection fee calculation methodology and develop proposed connection fees that are justifiable and fair to both new and existing users of the Authority's wastewater system.

1.2. Results and Recommendations

1.2.1. FINANCIAL PLAN

For this Study, Raftelis and the Authority examined three different financial planning scenarios. The Status Quo Scenario provided the Authority an understanding of the adequacy of current User Charges and Connection Fees in funding the Authority's expenses and debt obligations. Scenario 1, which is not recommended by Raftelis but approved by the Authority's Board of Commissioners, is an alternative revenue adjustment schedule that neither meets the Authority's revenue requirements nor its debt coverage requirements. Note that it incorporates the proposed Connection Fees discussed in Section 5. Scenario 2 presents Raftelis' recommended financial plan and required revenue adjustments in order to adequately meet the Authority's O&M, capital, and debt service expenses as well as meeting its required debt coverage ratio. As with Scenario 1, Scenario 2 incorporates the proposed Connection Fees rather than the current fees. Table 1-1 summarizes the different scenarios examined for this study.

Table 1-1: FY 2020-2024 Scenario Revenue Adjustment Comparison

Description	Connection Fees	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative Increase
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023	
Status Quo	Current	0%	0%	0%	0%	0%	0%
Scenario 1 (Approved)	Proposed	8%	8%	8%	8%	8%	46.9%
Scenario 2 (Raftelis Recommended)	Proposed	25%	2.5%	2.5%	2.5%	2.5%	38.0%

Figure 1-1: Scenario 1 O&M/R&R Fund Financial Plan Figure 1-1 illustrates Scenario 1's inability to meet the Authority's O&M and R&R capital expenses and the significant reliance on reserves to meet the Authority's costs for most of the Study Period. As a result of this depletion of reserves, the Authority is unable to meet its combined reserve targets as well as unable to meet its SRF Loan Reserve Requirement (Figure 1-2). As mentioned above, Scenario 1 also results in the Authority not meeting its debt coverage requirements in FY 2020 and FY 2021, as illustrated in Figure 1-3. It is for these reasons that Raftelis cannot recommend this scenario.

Figure 1-1: Scenario 1 O&M/R&R Fund Financial Plan

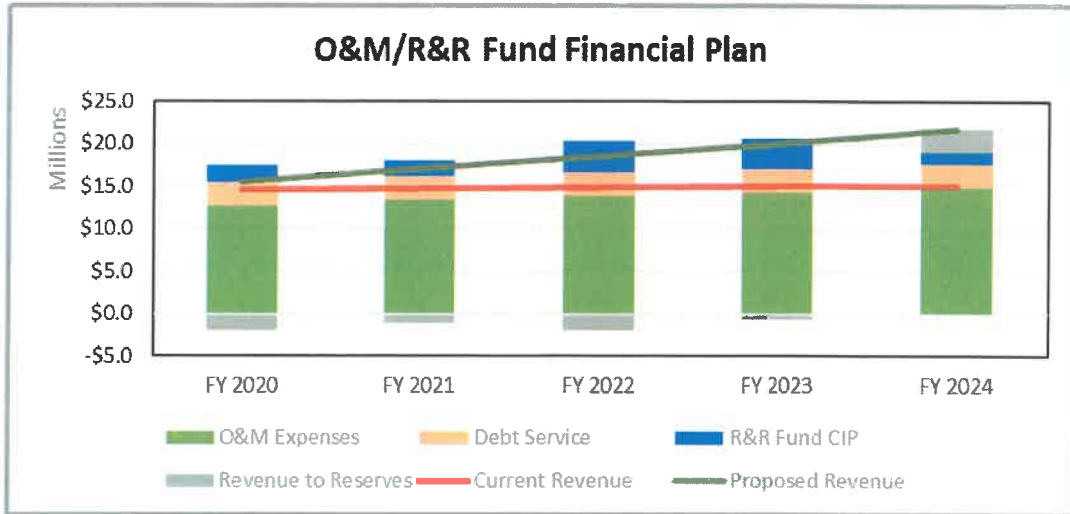


Figure 1-2: Scenario 1 Total Fund Balance

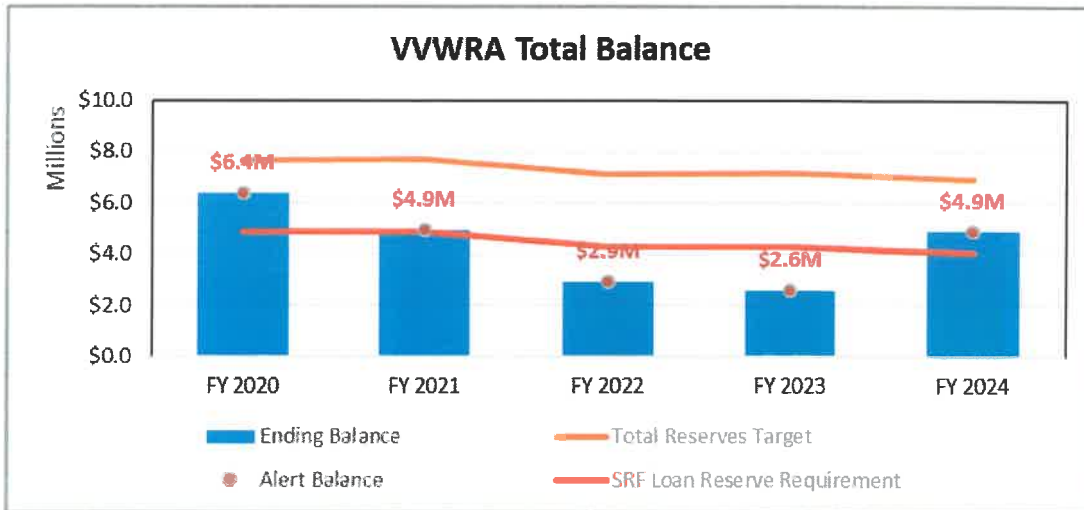
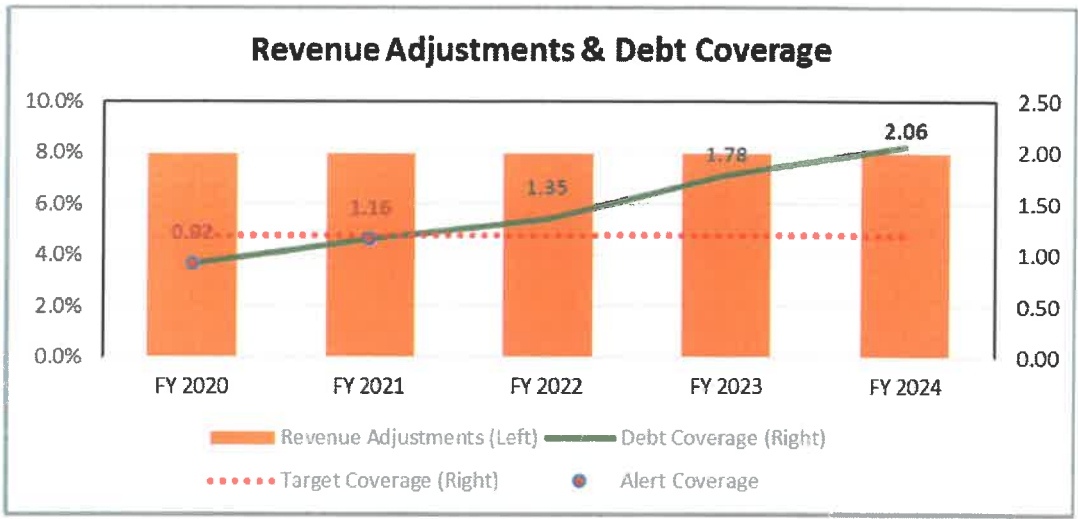


Figure 1-3: Scenario 1 Debt Coverage



In contrast, while Scenario 2 requires some reliance on reserves, it does meet the SRF Reserve Requirement and the debt coverage requirement for the entire Study period. In order to fully fund expenses through rate revenue and not rely on reserves at all, the Authority would have to utilize greater revenue adjustments than proposed in Scenario 2. Figure 1-4, Figure 1-5, and Figure 1-6 show how the Authority meets its obligations while sufficiently funding its expenses.

Figure 1-4: Scenario 2 O&M/R&R Fund Financial Plan

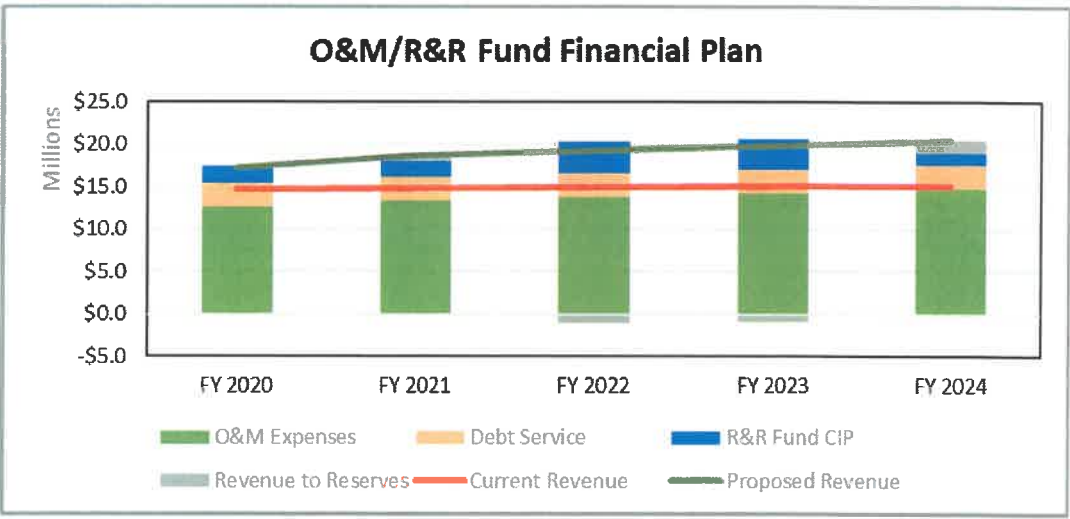


Figure 1-5: Scenario 2 Total Fund Balance

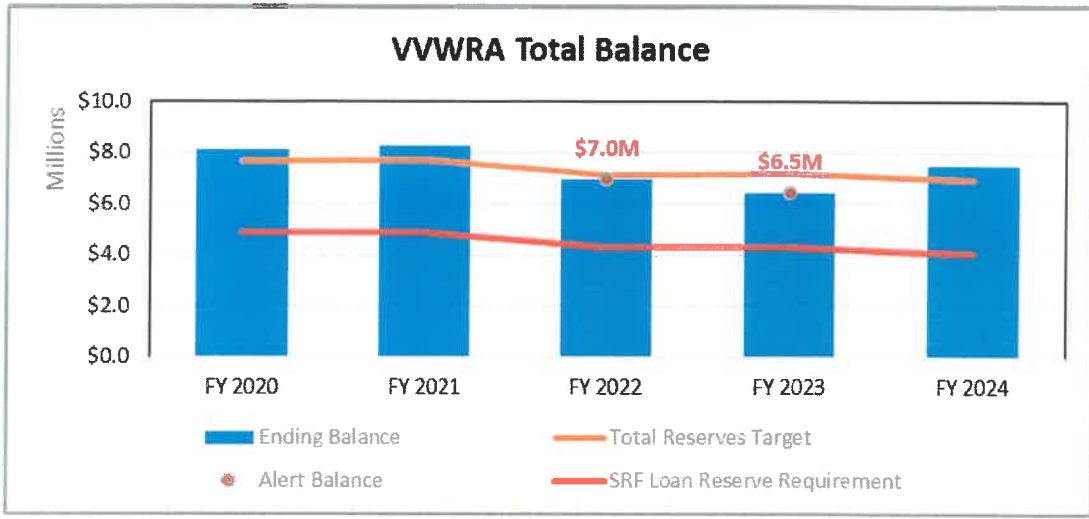
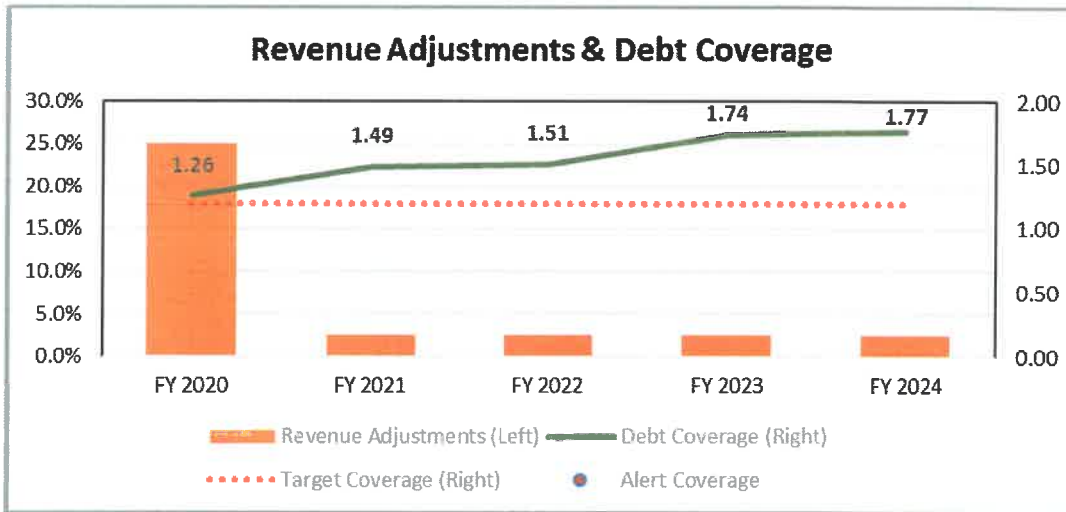


Figure 1-6: Scenario 2 Debt Coverage



1.2.2. PROPOSED USER CHARGES

Proposed User Charges are calculated by simply increasing the prior year’s rates by the proposed revenue adjustments from Table 1-1. **Error! Reference source not found.** shows proposed user charges in each year throughout the Study Period for Scenario 1 and Scenario 2.

Table 1-2: Proposed User Charges (per MG)

Description	Current FY 2019	Proposed FY 2020	Proposed FY 2021	Proposed FY 2022	Proposed FY 2023	Proposed FY 2024
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023
Scenario 1 (Approved)	\$3,503	\$3,784	\$4,087	\$4,414	\$4,768	\$5,150
Scenario 2 (Raftelis Recommended)	\$3,503	\$4,379	\$4,489	\$4,602	\$4,718	\$4,836

1.2.3. UPDATED CONNECTION FEES

The Authority has not updated its Connection Fees since 2014. Therefore, they are no longer reflective of new development's share of the facilities. The Authority utilizes a uniform per EDU Connection Fee that is based on expected demand of one single family residential customer (the equivalent dwelling unit). This translates other customer types to an equivalent number of single-family residential customers. The assumed gallons per day of wastewater flow contributed by one EDU is 200 gallons.

Table 1-3: Current Connection Fee

Description	Connection Fee
1 EDU	\$4,000

The Authority's wastewater system has capacity within the existing system to serve future growth; however, there are also specific growth-related capital projects necessary accommodate new equivalent dwelling units. Therefore, we utilized the hybrid approach. Section 5 provides the detailed calculation of the buy-in and incremental components combined to arrive at the proposed Connection Fee. Table 1-4 shows the resulting proposed Connection Fee per equivalent dwelling unit (EDU) in comparison to the current Connection Fee.

Table 1-4: Proposed Connection Fee Impact

Description	Impact
Proposed Connection Fee (\$/EDU)	\$4,679
Current Connection Fee (\$/EDU)	\$4,000
Difference (\$)	\$679
Difference (%)	17.0%

2. Introduction

2.1. Background of the Study

The Victor Valley Wastewater Reclamation Authority (the Authority) is a Joint Power public agency of the State of California formed in 1977 to maintain compliance with the Federal Clean Water Act and to provide wastewater treatment within a 279 square mile service area in San Bernardino County. The primary function of the Authority is to receive and treat wastewater from the four member agencies listed below:

- » Town of Apple Valley
- » City of Hesperia
- » City of Victorville
- » County of San Bernardino Special District Service Areas No. 42 (Oro Grande) and No. 64 (Spring Valley Lake)

The Authority is governed by a Board of Commissioners that consists of four elected officials representing each member agency listed above. The Authority operates a Regional Wastewater Treatment Plant with 17 million gallons per day (MGD) of treatment capacity in the City of Victorville. Additionally, the Authority completed construction in April 2018 of two Sub-regional Wastewater Reclamation Plants with 1 MGD of treatment capacity each in the Town of Apple Valley and the City of Hesperia. Wastewater treated by the Authority is either discharged to the Mojave River or utilized as recycled water for irrigative use after undergoing an extensive cleaning and purification process.

The Authority engaged Raftelis in 2018 to conduct a wastewater rate study and connection fee update (Study). The purpose of the Study is to update the Authority's financial plan, user charges, and connection fees. User charges assessed per million gallons (MG) of billed wastewater flows and one-time connection fees assessed per equivalent dwelling unit (EDU) of new development constitute the vast majority of the Authority's annual revenues. Therefore, both user charges and connection fees must be appropriately set to ensure the financial sufficiency of the Authority in manner that is equitable across member agencies.

The Authority last conducted a Financial Plan Update Study and Connection Fee Study in 2014. These prior studies established proposed user charges and connection fees through fiscal year (FY) 2018.² Since these prior studies were completed in 2014, unanticipated circumstances have significantly impacted the Authority's financial situation. Firstly, the service area has experienced slower growth from new development than what was anticipated in the 2014 studies. Consequently, lower revenues from user charges and connection fees have been collected compared to projections from the prior financial plan. Additionally, a flow diversion by the City of Victorville and non-payment of connection fees by the City of Hesperia have critically impacted the Authority's financial situation in an adverse manner.

This Study was conducted in order to develop an updated financial plan that accounts for the aforementioned financial challenges which have emerged since the prior studies were conducted in 2014, and to develop updated user charges and connection fees that enhance the financial stability of the Authority. All analyses, results, and recommendations related to this Study are outlined in this Wastewater Rate Study and Connection Fee Update Report (Report).

² The Authority's fiscal year spans from July 1 of the prior calendar year to June 30 of the concurrent calendar year. For example, FY 2018 spanned from July 1, 2017 to June 30, 2018.

Given these considerations, the major objectives of this Study include the following:

4. Develop an updated five-year financial plan through FY 2024 to ensure financial sufficiency, meet operating costs, ensure sufficient funding to meet debt obligations, and fund necessary capital expenditures;
5. Develop proposed user charges rates for FY 2020 to FY 2024; and
6. Update the prior connection fee calculation methodology and develop proposed connection fees that are justifiable and fair to both new and existing users of the Authority's wastewater system.

3. Key Assumptions

The Study period is from FY 2020 to 2024. The Study is based on the FY 2020 budget inflated annually to forecast changes in costs. Various types of assumptions and inputs were incorporated into the Study based on directions from Authority staff. The cost escalation factors are shown in Table 3-1. The general inflation rate of 3% is based on a historical Consumer Price Index (CPI) range of 3-3.5%. All other inflationary assumptions were determined based on Authority staff estimates.

Table 3-1: Cost Escalation Factors

Inflationary Category	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
General	3.0%	3.0%	3.0%	3.0%	3.0%
Salaries	3.0%	3.0%	3.0%	3.0%	3.0%
Benefits	5.0%	5.0%	5.0%	5.0%	5.0%
Utilities	3.0%	3.0%	3.0%	3.0%	3.0%
Capital	3.1%	3.1%	3.1%	3.1%	3.1%
Non-Inflated	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Recurring	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%
Combined Salary/Benefits	3.0%	3.0%	3.0%	3.0%	3.0%

The Authority does not expect to serve any additional agencies over its current customer base during the Study period. However, across its member agencies, they expect the addition of 500 equivalent dwelling units (EDUs) per fiscal year. This incremental increase (Table 3-2, Line 1) will both provide the Authority with additional connection fee revenues and slightly increase wastewater flows annually during the Study period (Line 2). The Authority does not expect water conservation to affect wastewater flows during the Study period (Line 3). The resulting projected flows in million gallons (MG) are shown in Line 4.

Table 3-2: System Demand Assumptions

Line	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Incremental Increase in EDUs	500	500	500	500	500
2	Annual Growth in Billed Wastewater Flows	0.59%	0.80%	0.80%	0.80%	0.80%
3	Water Conservation Factor	100%	100%	100%	100%	100%
4	Total Billed Wastewater Flows (MG)	3,900	3,931	3,963	3,994	4,026

4. Financial Plan Development

4.1. Operating & Maintenance Expenses

The Authority's combined Operating and Maintenance (O&M) expenses are shown in Table 4-1. The FY 2020 budget is inflated according to the inflationary factors shown in Section 3. Personnel Expenses include salaries, CALPERS benefits, and insurance. Maintenance Expenses includes costs such as vehicle repairs, maintaining safety equipment, and grounds maintenance. Operations Expenses encompass costs such as utility bills, wastewater treatment costs, and lab supplies. Administrative Expenses include office supplies, legal services, and permits & professional fees. Note that Construction Expenses consist of other interest expenses and are not capital improvements themselves.

Table 4-1: Budgeted and Projected Water O&M Expenses

Description	FY 2020 Budgeted	FY 2021 Projected	FY 2022 Projected	FY 2023 Projected	FY 2024 Projected
Personnel Expenses	\$4,974,695	\$5,481,876	\$5,687,015	\$5,890,914	\$6,102,583
Maintenance Expenses	\$2,864,482	\$2,950,416	\$3,038,929	\$3,130,097	\$3,224,000
Operations Expenses	\$3,433,685	\$3,556,645	\$3,684,056	\$3,816,082	\$3,952,891
Administration Expenses	\$1,822,648	\$1,877,327	\$1,933,647	\$1,991,657	\$2,051,406
Construction Expenses	\$10,957	\$10,957	\$10,957	\$10,957	\$10,957
Total	\$13,106,467	\$13,877,222	\$14,354,605	\$14,839,707	\$15,341,837

4.2. Debt Service Obligations

Table 4-2 lists the Authority's annual debt service for the Study period. The debt obligation for both the 9.5 MGD Capital Improvements and 11 MGD Expansion of the treatment plant will be fulfilled during the Study period (FY 2020 and FY 2022 respectively). Additionally, the Authority does not intend to incur any new debt during the Study period.

Table 4-2: Annual Debt Service

Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Current Debt					
9.5 MGD Capital Improvements	\$265,049	\$0	\$0	\$0	\$0
11 MGD Expansion	\$579,870	\$579,870	\$579,870	\$0	\$0
North Apple Valley Interceptor	\$258,151	\$258,151	\$258,151	\$258,151	\$258,151
Phase IIIA Regulatory Upgrades	\$1,027,610	\$1,027,610	\$1,027,610	\$1,027,610	\$1,027,610
Upper Narrows Replacement	\$257,745	\$257,745	\$257,745	\$257,745	\$257,745
Nanticoke Bypass	\$271,633	\$271,633	\$271,633	\$271,633	\$271,633
Apple Valley Sub-Regional	\$1,024,951	\$1,024,951	\$1,024,951	\$1,024,951	\$1,024,951
Hesperia Subregional	\$1,462,850	\$1,462,850	\$1,462,850	\$1,462,850	\$1,462,850
Total Current Debt	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940
Proposed Debt					
	\$0	\$0	\$0	\$0	\$0
Total Debt Service	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940

4.3. Capital Improvement Plan

Table 4-3 lists the Authority's capital improvement plan (CIP) for the Study period. The Authority intends to fully fund its CIP for the Study period through User Charge and Connection Fee Revenues. User Charge revenues (O&M/R&R Fund) will fund capital repair and replacement projects, while the Connection Fee revenues (Capital Fund) will fund new capital projects.

Table 4-3: FY 2020-2024 Capital Improvement Plan

Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Digester 4&5 Dome Repair and Misc. Mechanical	\$325,000	\$386,660	\$0	\$0	\$0
Digester 4&5 Dome Repair and Misc. Mechanical	\$50,000	\$0	\$0	\$0	\$0
SCADA Upgrade Project (Ignition)	\$0	\$143,322	\$0	\$0	\$0
Coating Project: UV and DAFTS	\$425,000	\$0	\$0	\$0	\$0
Digital Information Management System (DIMS)	\$0	\$61,866	\$0	\$0	\$0
Headworks Replacement	\$50,000	\$154,664	\$212,631	\$3,288,628	\$0
Oro Grande Interceptor First Priority - possible USDA grant	\$150,000	\$103,109	\$2,498,409	\$0	\$0
Ossum Wash	\$0	\$670,210	\$0	\$0	\$0
R4B South Lower Narrows	\$0	\$0	\$0	\$0	\$0
Interceptor Risk Assessment Report	\$50,000	\$0	\$0	\$0	\$0
Programmable Logic Control (PLC) Replacement	\$400,000	\$0	\$0	\$0	\$0
Programmable Logic Control (PLC) Replacement	\$55,000	\$0	\$0	\$0	\$0
Fleet Replacement	\$100,000	\$0	\$0	\$0	\$0
Network Re-design and updates	\$100,000	\$51,555	\$0	\$0	\$0
Network Re-design and updates	\$35,000	\$0	\$0	\$0	\$0
Main Switch Board Upgrade/Replacement	\$0	\$0	\$372,103	\$0	\$0
Motor Control Center (MCC) - Aqua Diamonds	\$0	\$170,130	\$0	\$0	\$0
UV Generator Tie-in to South Perc. Pond PS	\$0	\$0	\$398,682	\$0	\$0
Micro-grid/Battery Storage Project	\$0	\$0	\$0	\$0	\$0
Storm Water Spill Containment System	\$400,000	\$0	\$0	\$0	\$0
Digester 1-5 Engineering Services	\$50,000	\$20,622	\$0	\$0	\$0
Golf Cart Recharging Station	\$0	\$15,466	\$0	\$0	\$0
Operations Building Extension	\$0	\$206,219	\$0	\$0	\$0
Digesters 4 and 5 Supernatant Line	\$0	\$77,332	\$0	\$0	\$0
Upgrades to AV WRP	\$100,000	\$0	\$0	\$0	\$0
R4A North Lower Narrows MH 3-1 to MH 3-3	\$0	\$51,555	\$106,315	\$54,810	\$1,895,502
R7 Old Town VV MH 4-24 to MH 4-25A	\$0	\$0	\$0	\$109,621	\$113,029
R5 Cemex MH 4-7 to 4-14	\$0	\$0	\$53,158	\$109,621	\$113,029
R4B South Lower Narrows	\$0	\$0	\$0	\$0	\$0
Solids Dewatering and Side Stream Study	\$50,000	\$0	\$0	\$0	\$0
Capitalized Pump Expenses	\$288,000	\$123,731	\$127,578	\$131,545	\$135,635
Total	\$2,628,000	\$2,236,441	\$3,768,876	\$3,694,225	\$2,257,196

Figure 4-1 and Figure 4-2 show total CIP by funding source for the Authority's R&R Fund and Capital Fund respectively. R&R Fund CIP includes projects required to maintain the existing wastewater system, while Capital Fund CIP includes CIP projects required to serve future new connections to the wastewater system.

Figure 4-1: FY 2020-2024 O&M/R&R Fund Capital Financing Plan

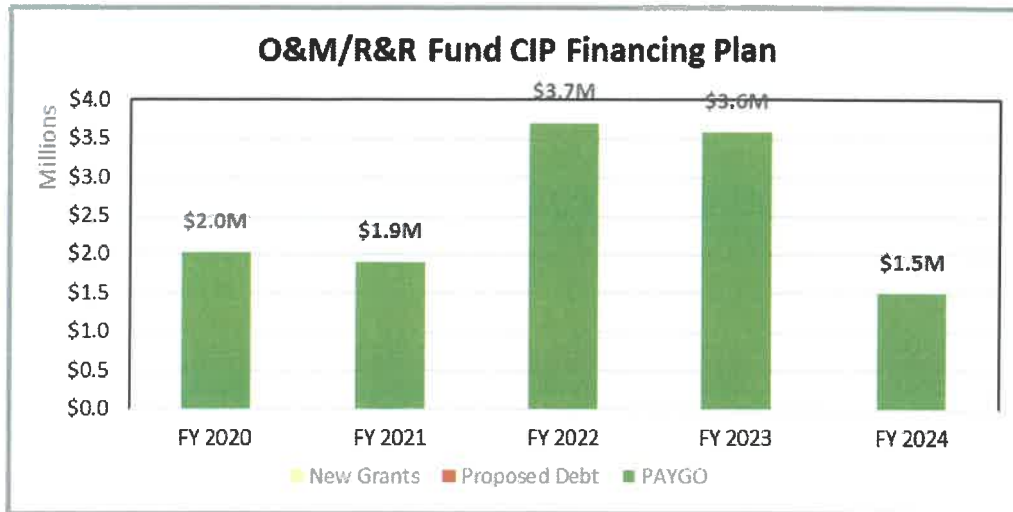
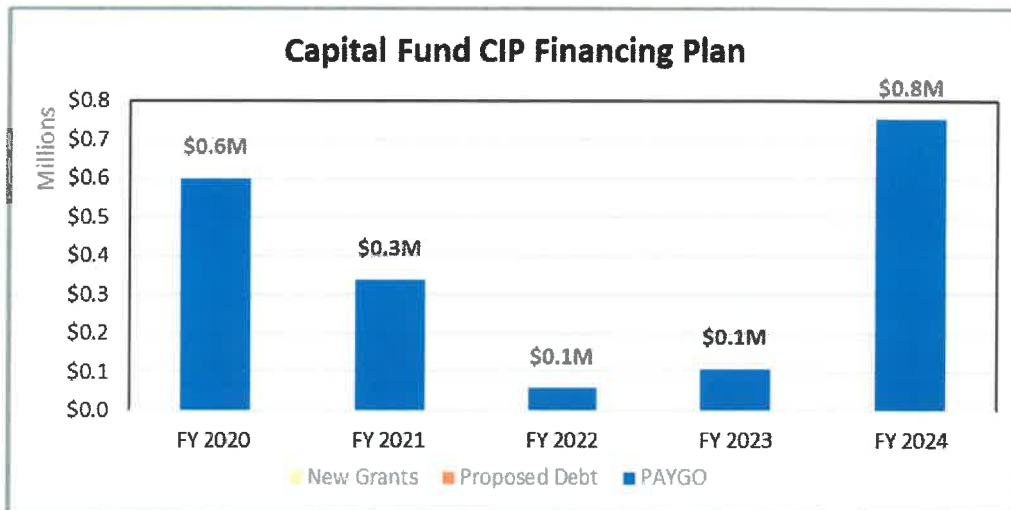


Figure 4-2: FY 2020-2024 CIP Fund Capital Financing Plan



4.4. Financial Planning Scenarios

For this Study, Raftelis and the Authority examined three different financial planning scenarios. The Status Quo Scenario provided the Authority an understanding of the adequacy of current User Charges and Connection Fees in funding the Authority's expenses and debt obligations. Scenario 1, which is not recommended by Raftelis but approved by the Authority's Board of Commissioners, is an alternative revenue adjustment schedule that neither meets the Authority's revenue requirements nor its debt coverage requirements. Note that it incorporates the proposed Connection Fees discussed in Section 5. Scenario 2 presents Raftelis' recommended financial plan and required revenue adjustments in order to adequately meet the Authority's O&M, capital, and debt service expenses as well as meeting its required debt coverage ratio. As with Scenario 1, Scenario 2 incorporates the proposed Connection Fees rather than the current fees. Table 4-4 summarizes the different scenarios examined for this study.

Table 4-4: FY 2020-2024 Scenario Revenue Adjustment Comparison

Description	Connection Fees	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative Increase
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023	
Status Quo	Current	0%	0%	0%	0%	0%	0%
Scenario 1 (Approved)	Proposed	8%	8%	8%	8%	8%	46.9%
Scenario 2 (Raftelis Recommended)	Proposed	25%	2.5%	2.5%	2.5%	2.5%	38.0%

4.4.1. STATUS QUO FINANCIAL PLAN (NO REVENUE INCREASE)

The Status Quo financial plan projects the Authority's ability to meet its expenses under current User Charges, which have not been increased since FY 2018. In this section, we calculate revenue under the current User Charges and examine how well it meets the Authority's revenue requirement.

4.4.1.1. Projected Revenues Under Current Rates

The current user charge has been in place since FY 2018, with the previous study conducted in calendar year 2014. Currently, all member agencies pay a flat user charge of \$3,503 per MG of flow into the system. Revenues from the User Charge are calculated by multiplying this charge by the total projected wastewater flows shown in Line 4 of Table 3-2.

Table 4-5: FY 2020-2024 Projected Revenues from Current User Charge

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
User Charge	\$3,503	\$3,503	\$3,503	\$3,503	\$3,503
Total Billed Wastewater Flows (MG)	3,900	3,931	3,963	3,994	4,026
Total User Charge Revenue	\$13,661,700	\$13,770,994	\$13,881,162	\$13,992,211	\$14,104,149

As mentioned in Section 3, the Authority expects that 500 additional units will be added each year between the four member agencies. The Authority charges a Connection Fee for each added EDU. When a wastewater treatment system is developed, it requires significant infrastructure investment to build the system. The initial EDUs served pay for the construction of this infrastructure through their wastewater charges. New EDUs would not have made that investment. Therefore, the Authority charges a uniform Connection Fee per EDU, which can recoup some of the costs of the initial investment and/or expansion of the system. For this Study, Raftelis has also updated the Connection Fees, which are discussed in detail in Section 5. Table 4-6 shows the calculation of the projected Connection Fee revenue under the current fees.

Table 4-6: FY 2020-2024 Projected Revenues from Current Connection Fees

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Connection Fee	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
Additional EDUs per Year	500	500	500	500	500
Total Connection Fee Revenue	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000

Table 4-7 shows the projected total revenues for the Study period. In addition to the User Charge and Connection Fee revenue calculated above, the Authority also earns other revenue from services such as fats, oils, and grease (FOG) tipping fees and processing high strength waste in addition to earning interest.

Table 4-7: Status Quo Scenario FY 2020-2024 Projected Total Revenues

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
User Charge Revenues	\$13,661,700	\$13,770,994	\$13,881,162	\$13,992,211	\$14,104,149
Connection Fee Revenues	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
Interest	\$50,000	\$75,273	\$68,387	\$65,321	\$61,485
Total	\$16,777,900	\$16,909,967	\$17,013,248	\$17,121,232	\$17,229,334

4.4.1.2. Resulting Status Quo Financial Plan

Table 4-8 displays the pro forma of the Authority's combined funds (O&M/R&R Funds and Capital Fund) under current rates over the Study period without any revenue adjustment. The pro forma examines how well the projected revenues in Table 4-7 meet the O&M expenses defined in Table 4-1, debt service obligations in Table 4-2, and the CIP detailed in Table 4-3. Line 16 shows the net cash flow resulting from subtracting these expenses (Line 14) from the projected revenues under current rates (Line 6). The net cash flow for the Study period indicates that the current rates significantly underfund the Authority's financial obligations. Figure 4-3 illustrates the impact of maintaining current rates on the O&M and R&R combined funds as the Capital Fund is designated for expansion capital improvements and separately funded through Connection Fees. Note that, even when narrowing the focus to only the O&M/R&R Fund, current revenues are unable to meet these obligations.

As a result of insufficient revenues, the Authority must supplement revenues with reserve funds, shown in Table 4-8 by subtracting the net cash flow (Line 16) from the beginning cash balance (Line 20). While this solution funds expenses for FY 2020 and FY 2021, beginning in FY 2022, the Authority would be unable to fully fund its expenses. The Authority is unable to meet its combined reserve target, set by Authority policy, or its SRF loan reserve requirement (Figure 4-4) under current rates. In addition, the Authority is unable to meet its required debt coverage ratio during the entire Study period (Lines 23 and 24). The insufficiency of the current rates to meet this debt coverage obligation is also shown in Figure 4-5.

Table 4-8: Status Quo Financial Plan

Line No.	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Source of Funds					
2	User Charge Revenues	\$13,661,700	\$13,770,994	\$13,881,162	\$13,992,211	\$14,104,149
3	Connection Fee Revenues	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
4	Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
5	Interest	\$50,000	\$75,273	\$68,387	\$65,321	\$61,485
6	Total - Source of Funds	\$16,777,900	\$16,909,967	\$17,013,248	\$17,121,232	\$17,229,334
7						
8	Use of Funds					
9	Operating Expenses	\$13,106,467	\$13,877,222	\$14,354,605	\$14,839,707	\$15,341,837
10	R&R Fund CIP	\$2,028,000	\$1,898,758	\$3,709,340	\$3,586,249	\$1,502,217
11	Capital Fund CIP	\$600,000	\$337,683	\$59,537	\$107,977	\$754,980
12	Existing Debt Service	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940
13	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0
14	Total - Use of Funds	\$20,882,328	\$20,996,473	\$23,006,291	\$22,836,872	\$21,901,974
15						
16	Net Cash Flow	(\$4,104,428)	(\$4,086,506)	(\$5,993,043)	(\$5,715,640)	(\$4,672,640)
17						
18	Beginning Cash Balance	\$9,427,089	\$5,322,661	\$1,236,155	(\$4,756,888)	(\$10,472,528)
19						
20	Ending Cash Balance	\$5,322,661	\$1,236,155	(\$4,756,888)	(\$10,472,528)	(\$15,145,168)
21	Total Reserves Target	\$7,703,034	\$7,716,936	\$7,173,072	\$7,196,147	\$6,961,462
22						
23	Debt Coverage	71%	62%	54%	53%	44%
24	Target Coverage	120%	120%	120%	120%	120%

Figure 4-3: Status Quo O&M/R&R Fund Financial Plan

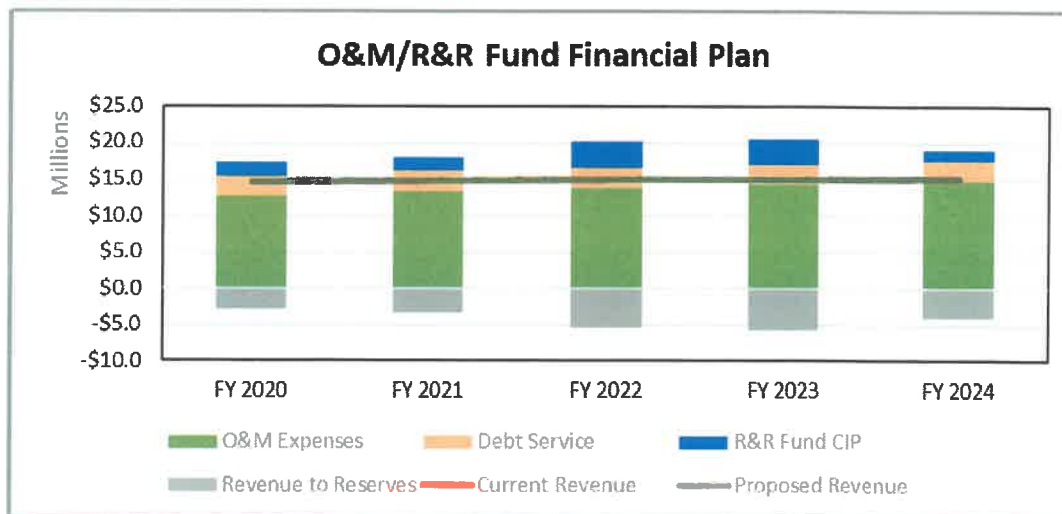


Figure 4-4: Status Quo Total Fund Balance

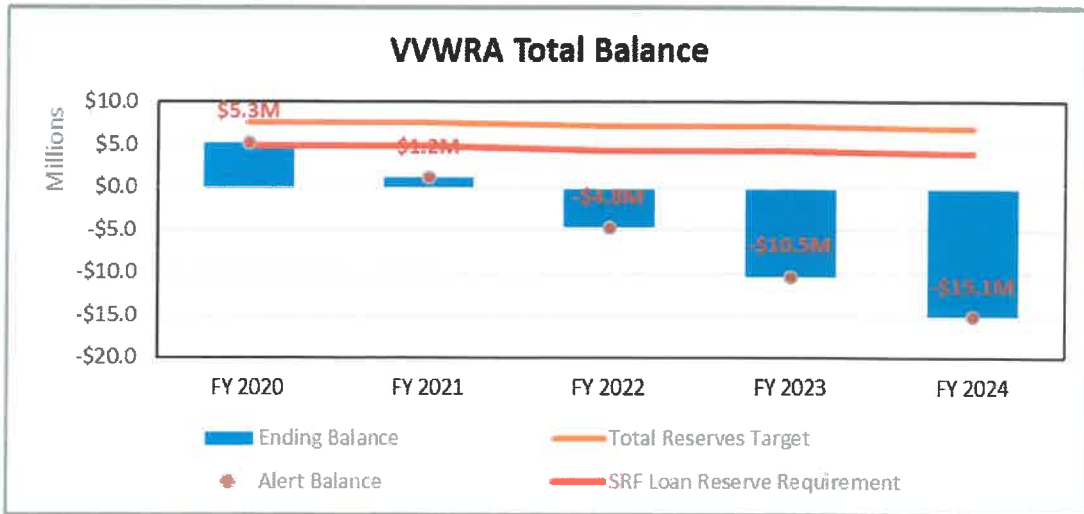
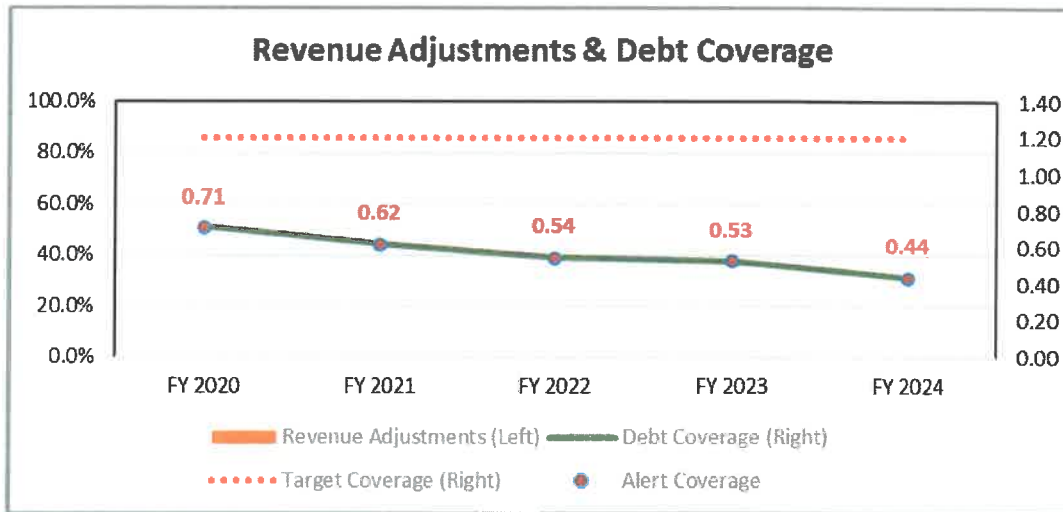


Figure 4-5: Status Quo Debt Coverage



4.4.2. SCENARIO 1 FINANCIAL PLAN (APPROVED BY BOARD)

The Scenario 1 financial plan projects the Authority’s ability to meet its expenses under the Board-approved revenue adjustment schedule, shown below in Table 4-9. This schedule will increase the current User Charge of \$3503/MG by 8-percent annually for the Study period, resulting in a cumulative increase of 46.9-percent. In this section, we calculate revenue under the resulting Scenario 1 User Charges and examine how well it meets the Authority’s revenue requirement. Note, this Board-approved scenario does not meet required debt coverage in all years within the Study period. Therefore, under our fiduciary responsibility as a municipal advisor, Raftelis cannot recommend proceeding with this scenario.

Table 4-9: Scenario 1 FY 2020-2024 Revenue Adjustment Schedule

Description	Connection Fees	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative Increase
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023	
Scenario 1 Percent Increases (Approved)	Proposed	8%	8%	8%	8%	8%	46.9%
Scenario 1 User Charges (Approved)		\$3,784	\$4,087	\$4,414	\$4,768	\$5,150	

4.4.2.1. Projected Revenues Under Scenario 1 Charges

Revenues from the Scenario 1 User Charges are calculated by first escalating the current User Charge by the schedule in Table 4-9. The resulting charge for each year is then multiplied by the projected billed wastewater flows (Line 4 of Table 3-2) to arrive at the total User Charge Revenues under the approved Scenario 1 User Charges. Note that the FY 2020 increase will not be implemented until October 2019.

Table 4-10: FY 2020-2024 Projected Revenues from Approved Scenario 1 User Charge

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Scenario 1 User Charge	\$3,503	\$3,784	\$4,087	\$4,414	\$4,768	\$5,150
Total Billed Wastewater Flows (MG)		3,900	3,931	3,963	3,994	4,026
Total Scenario 1 User Charge Revenue		\$14,481,402	\$16,062,487	\$17,486,266	\$19,036,248	\$20,723,621

Under this scenario, the Authority also expects that 500 additional units (as in the Status Quo Scenario) will be added each year between the four member agencies. Scenario 1 incorporates the proposed Connection Fees, detailed in Section 5. As noted in the previous section, Connection Fee revenues are allocated entirely to Capital Fund costs to pay for construction related to new development. The fee will continue to be a uniform fee per added EDU with only an initial increase in FY 2020 and no further adjustments over the Study period. Table 4-11 shows the projected revenues from the proposed Connection Fees. The Authority expects to incorporate the new Connection Fees in October 2019. Therefore, FY 2020 shows less total revenue from the Connection Fees as it will continue to use the current Connection Fee for the first three months of the fiscal year.

Table 4-11: FY 2020-2024 Projected Revenues from Proposed Connection Fees

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Connection Fee	\$4,000	\$4,679	\$4,679	\$4,679	\$4,679	\$4,679
Additional EDUs per Year		500	500	500	500	500
Total Connection Fee Revenue		\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500

Table 4-12 shows the projected total revenues for the Study period under Scenario 1. This combines the revenue calculated in Table 4-10 and Table 4-11 with the Other Operating Revenues and Interest originally projected in Table 4-7.

Table 4-12: Scenario 1 FY 2020-2024 Projected Total Revenues

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
User Charge Revenues	\$14,481,402	\$16,062,487	\$17,486,266	\$19,036,248	\$20,723,621
Connection Fee Revenues	\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500
Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
Interest	\$50,000	\$79,517	\$76,068	\$76,474	\$76,145
Total	\$17,852,227	\$19,545,204	\$20,965,534	\$22,515,922	\$24,202,966

4.4.2.2. Resulting Scenario 1 Financial Plan

Table 4-13 displays the pro forma of the Authority's combined funds (O&M Fund, R&R Fund, and Capital Fund) under Scenario 1 approved User Charges and Connection Fees over the Study period. The pro forma examines how well the projected revenues in Table 4-12 meet the O&M expenses defined in Table 4-1, debt service obligations in Table 4-2, and the CIP detailed in Table 4-3. Line 16 shows the net cash flow resulting from subtracting these expenses (Line 14) from the projected revenues under Scenario 1 charges (Line 6). The net cash flow improves somewhat under Scenario 1, but still significantly underfunds the Authority's financial obligations until FY 2024, where it begins to show a positive net cash flow. Figure 4-6 illustrates the impact of Scenario 1 on the O&M and R&R Funds. Under this scenario, the Authority begins to meet its debt coverage obligation in FY 2022 (also shown in Table 4-13, Line 23) due to the revenue adjustments combined with the remaining balance in the combined reserves. However, the Authority must make up the entire shortfall (Line 16) in FY 2020 and FY 2021 through reserve funding. As noted before, since the Authority is unable to meet its required debt coverage ratio under this scenario in FY 2020 and FY 2021 (Table 4-13, Line 23 and Figure 4-8), Raftelis cannot recommend that the Authority implement this scenario.

Since this scenario still results in insufficient revenues for FY 2020 through FY 2023, the Authority must supplement revenues with reserve funds, shown in Table 4-13 by subtracting the net cash flow (Line 16) from the beginning cash balance (Line 20). While this scenario avoids fully depleting reserves, it still reduces combined reserves to insufficient levels for its combined reserve target. It also does not meet the Authority's SRF loan reserve requirement (Figure 4-4) in FY 2022 and FY 2023.

Table 4-13: Scenario 1 Financial Plan

Line No.	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Source of Funds					
2	User Charge Revenues	\$14,481,402	\$16,062,487	\$17,486,266	\$19,036,248	\$20,723,621
3	Connection Fee Revenues	\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500
4	Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
5	Interest	\$50,000	\$79,517	\$76,068	\$76,474	\$76,145
6	Total - Source of Funds	\$17,852,227	\$19,545,204	\$20,965,534	\$22,515,922	\$24,202,966
7						
8	Use of Funds					
9	Operating Expenses	\$13,106,467	\$13,877,222	\$14,354,605	\$14,839,707	\$15,341,837
10	R&R Fund CIP	\$2,028,000	\$1,898,758	\$3,709,340	\$3,586,249	\$1,502,217
11	Capital Fund CIP	\$600,000	\$337,683	\$59,537	\$107,977	\$754,980
12	Existing Debt Service	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940
13	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0
14	Total - Use of Funds	\$20,882,328	\$20,996,473	\$23,006,291	\$22,836,872	\$21,901,974
15						
16	Net Cash Flow	(\$3,030,101)	(\$1,451,269)	(\$2,040,757)	(\$320,950)	\$2,300,992
17						
18	Beginning Cash Balance	\$9,427,089	\$6,396,988	\$4,945,719	\$2,904,962	\$2,584,012
19						
20	Ending Cash Balance	\$6,396,988	\$4,945,719	\$2,904,962	\$2,584,012	\$4,885,005
21	Total Reserves Target	\$7,703,034	\$7,716,936	\$7,173,072	\$7,196,147	\$6,961,462
22						
23	Debt Coverage	92%	116%	135%	178%	206%
24	Target Coverage	120%	120%	120%	120%	120%

Figure 4-6: Scenario 1 O&M/R&R Fund Financial Plan

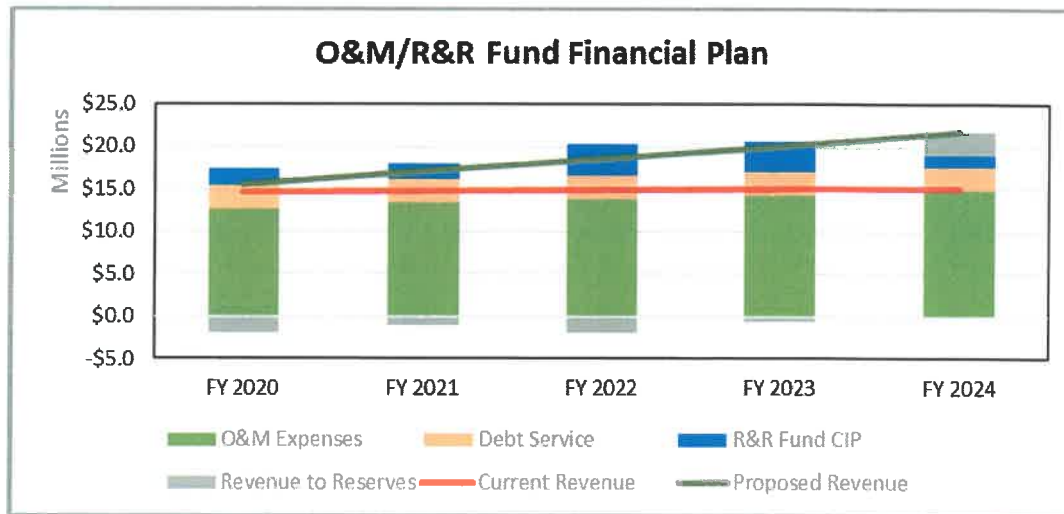


Figure 4-7: Scenario 1 Total Fund Balance

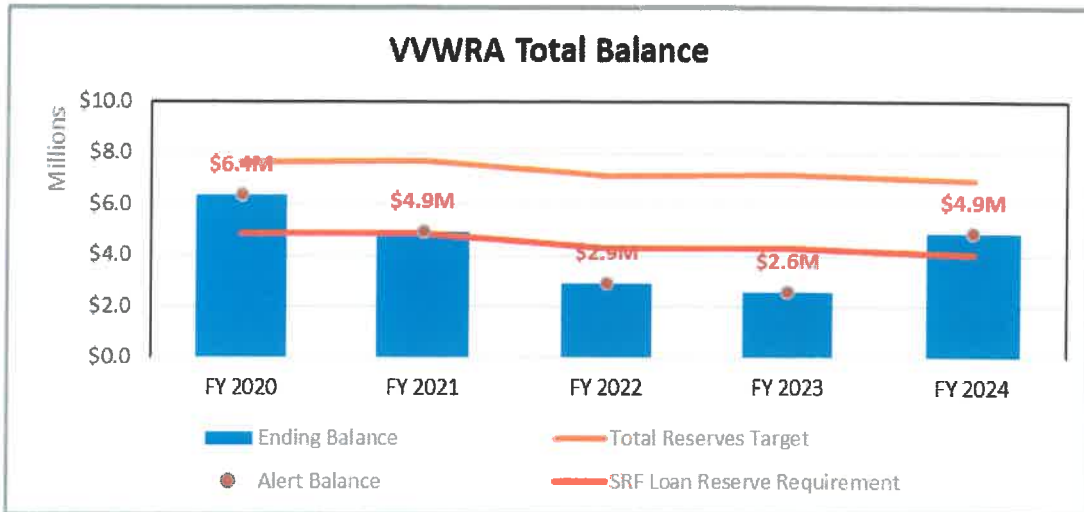
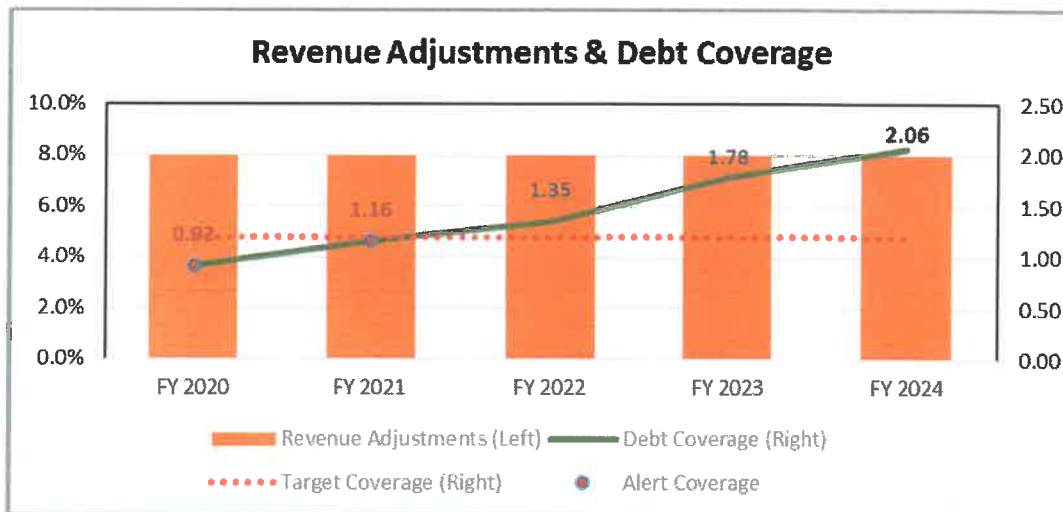


Figure 4-8: Scenario 1 Debt Coverage



4.4.3. SCENARIO 2 FINANCIAL PLAN (RAFTELIS RECOMMENDED)

Raftelis recommends the Scenario 2 Financial Plan, which projects the Authority funding its expenses while also meeting its debt coverage and reserve requirements for the entire Study period. The Scenario 2 revenue adjustments are shown below in Table 4-14. This scenario also incorporates the proposed Connection Fees effective October 2019. This schedule will increase the current User Charge of \$3,503/MG by 25-percent in October 2019 so that the Authority can begin meeting its debt coverage and reserve obligations. Raftelis then recommends an annual adjustment of 2.5-percent for the remaining years in the Study period, resulting in a cumulative increase of 38.0% for the 5-year Study period. In this section, we calculate revenue under the Scenario 2 User Charges resulting from this rate adjustment schedule and discuss how it meets the Authority’s expenses in addition to its debt coverage and SRF reserve requirements.

Table 4-14: Scenario 2 FY 2020-2024 Revenue Adjustment Schedule

Description	Connection Fees	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative Increase
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023	
Scenario 2 (Raftelis-Recommended)	Proposed	25%	2.5%	2.5%	2.5%	2.5%	38.0%
Scenario 2 User Charges		\$4,379	\$4,489	\$4,602	\$4,718	\$4,836	

4.4.3.1. Projected Revenues Under Scenario 2 Rates

As in the previous two scenarios, revenues from the Scenario 2 User Charge are calculated by first escalating the current User Charge by the schedule in Table 4-14. The resulting charge for each year is then multiplied by the projected billed wastewater flows (Line 4 of Table 3-2) to arrive at the total User Charge Revenues under the recommended Scenario 2 User Charges. Note that the FY 2020 increase will not be implemented until October 2019, thus the current rate is applied to the first three months' usage of the fiscal year.

Table 4-15: FY 2020-2024 Projected Revenues from Raftelis-Recommended Scenario 2 User Charge

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Scenario 2 User Charge	\$3,503	\$4,379	\$4,489	\$4,602	\$4,718	\$4,836
Total Billed Wastewater Flows (MG)		3,900	3,931	3,963	3,994	4,026
Total Scenario 2 User Charge Revenue		\$16,223,269	\$17,644,086	\$18,229,869	\$18,835,101	\$19,460,426

Under this scenario, the Authority also expects that 500 additional units (as in the Status Quo Scenario) will be added each year between the four member agencies. Like Scenario 1, Scenario 2 incorporates the proposed Connection Fees, detailed in Section 5. Again, Connection Fee revenues are allocated entirely to Capital Fund costs to pay for construction related to new development. The fee will continue to be a uniform fee per added EDU with only an initial increase in FY 2020 and no further adjustments over the Study period. Table 4-16 repeats the projected revenues from the proposed Connection Fees first calculated in Table 4-11. Note again that FY 2020 shows less total revenue from the Connection Fees as it will continue to use the current Connection Fee for the first three months of the fiscal year.

Table 4-16: FY 2020-2024 Projected Revenues from Proposed Connection Fees

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Connection Fee	\$4,000	\$4,679	\$4,679	\$4,679	\$4,679	\$4,679
Additional EDUs per Year		500	500	500	500	500
Total User Charge Revenue		\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500

Table 4-17 shows the projected total revenues for the Study period under Scenario 2. This combines the revenue calculated in Table 4-15 and Table 4-16 with the Other Operating Revenues originally projected in Table 4-7 and updated Interest revenue. Note that the Interest Revenue increases because the O&M/R&R Fund sees a positive

fund balance, which then gets added to the Interest earned through the CIP Fund's positive balance (note that this is the total Interest Revenue shown both in Table 4-7 and Table 4-12).

Table 4-17: Scenario 2 FY 2020-2024 Projected Total Revenues

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
User Charge Revenues	\$16,223,269	\$17,644,086	\$18,229,869	\$18,835,101	\$19,460,426
Connection Fee Revenues	\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500
Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
Interest	\$50,000	\$81,643	\$76,068	\$76,474	\$76,145
Total	\$19,594,094	\$21,128,928	\$21,709,137	\$22,314,775	\$22,939,771

4.4.3.2. Resulting Scenario 2 Financial Plan

Table 4-18 displays the pro forma of the Authority's combined funds (O&M Fund, R&R Fund, and Capital Fund) under Scenario 2 Raftelis-recommended User Charges and proposed Connection Fees over the Study period. The pro forma examines how well the projected revenues in Table 4-17 meet the O&M expenses defined in Table 4-1, debt service obligations in Table 4-2, and the CIP detailed in Table 4-3. Line 16 shows the net cash flow resulting from subtracting these expenses (Line 14) from the projected revenues under Scenario 2 charges (Line 6). The net cash flow, while only positive in FY 2021 and FY 2024 (Line 16), results in a significantly lower burden on reserves during the Study period. Note that, in order to result in a consistently positive cash flow, the Authority would have to implement higher rate adjustments than proposed in either Scenario 1 or Scenario 2. Figure 4-9 illustrates the impact of Scenario 1 on the O&M Fund and R&R Fund combined. In Scenario 2, the Authority's reserves are high enough for the entirety of the Study period to exceed the SRF Loan Reserve Requirement and meet the Authority's target reserves for all years except FY 2022 and FY 2023 (Figure 4-10). Importantly, this scenario also enables the Authority to meet its debt coverage requirements in all years of the Study period (Figure 4-11 and Table 4-18, Line 23).

Table 4-18: Scenario 2 Financial Plan

Line No.	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Source of Funds					
2	User Charge Revenues	\$16,223,269	\$17,644,086	\$18,229,869	\$18,835,101	\$19,460,426
3	Connection Fee Revenues	\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500
4	Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
5	Interest	\$50,000	\$81,643	\$76,068	\$76,474	\$76,145
6	Total - Source of Funds	\$19,594,094	\$21,128,928	\$21,709,137	\$22,314,775	\$22,939,771
7						
8	Use of Funds					
9	Operating Expenses	\$13,106,467	\$13,877,222	\$14,354,605	\$14,839,707	\$15,341,837
10	R&R Fund CIP	\$2,028,000	\$1,898,758	\$3,709,340	\$3,586,249	\$1,502,217
11	Capital Fund CIP	\$600,000	\$337,683	\$59,537	\$107,977	\$754,980
12	Existing Debt Service	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940
13	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0
14	Total - Use of Funds	\$20,882,328	\$20,996,473	\$23,006,291	\$22,836,872	\$21,901,974
15						
16	Net Cash Flow	(\$1,288,234)	\$132,455	(\$1,297,154)	(\$522,097)	\$1,037,797
17						
18	Beginning Cash Balance	\$9,427,089	\$8,138,855	\$8,271,310	\$6,974,156	\$6,452,059
19						
20	Ending Cash Balance	\$8,138,855	\$8,271,310	\$6,974,156	\$6,452,059	\$7,489,856
21	Total Reserves Target	\$7,703,034	\$7,716,936	\$7,173,072	\$7,196,147	\$6,961,462
22						
23	Debt Coverage	126%	149%	151%	174%	177%
24	Target Coverage	120%	120%	120%	120%	120%

Figure 4-9: Scenario 2 O&M/R&R Fund Financial Plan

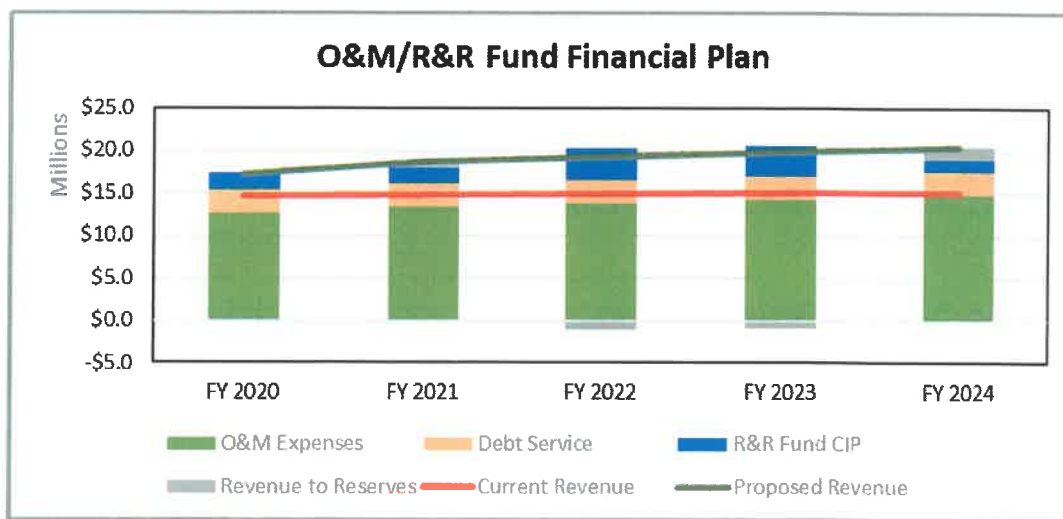


Figure 4-10: Scenario 2 Total Fund Balance

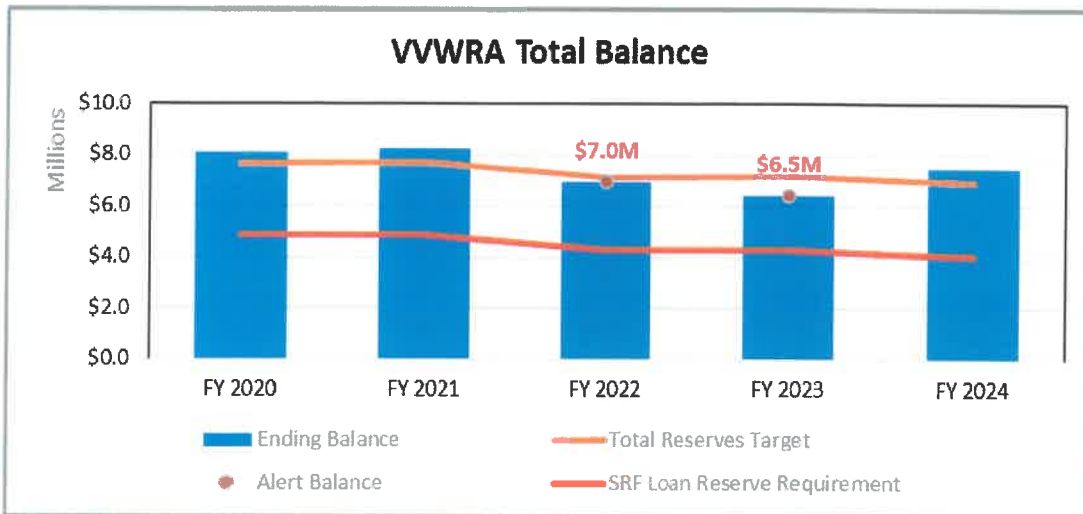
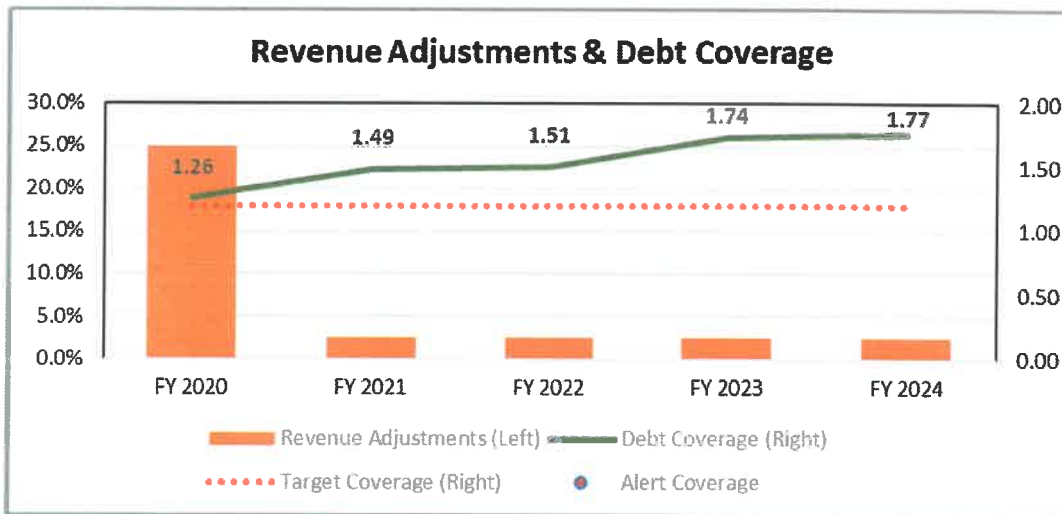


Figure 4-11: Scenario 2 Debt Coverage



4.5. Proposed User Charges

Table 4-19 shows the proposed User Charge rates under Scenario 1 and Scenario 2 over the five-year Study period. The User Charge rates shown below were previously derived in Table 4-9 for Scenario 1 and Table 4-14 for Scenario 2.

Table 4-19: Proposed User Charges (per MG)

Description	Current FY 2019	Proposed FY 2020	Proposed FY 2021	Proposed FY 2022	Proposed FY 2023	Proposed FY 2024
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023
Scenario 1 (Approved)	\$3,503	\$3,784	\$4,087	\$4,414	\$4,768	\$5,150
Scenario 2 (Raftelis Recommended)	\$3,503	\$4,379	\$4,489	\$4,602	\$4,718	\$4,836

5. Connection Fee Update

5.1. Economic and Legal Framework

For publicly owned wastewater systems, most of the assets are typically paid for by the contributions of existing customers through rates, charges, and taxes. In service areas that incorporate new customers, the infrastructure developed by previous customers is generally extended toward the service of new customers. Existing customers' investment in the existing system capacity allows newly connecting customers to take advantage of unused surplus capacity. To further economic equality among new and existing customers, in turn, new connectors will typically buy into the existing and pre-funded facilities based on the percentage of remaining available system capacity, effectively putting them on par with existing customers. In other words, the new users are buying into the existing system through a payment for the portion of facilities that has already been constructed in advance of new development. In addition, new customers will be responsible for funding new assets that will need to be built to expand the system to meet the increased demand.

5.1.1. ECONOMIC FRAMEWORK

The basic economic philosophy behind connection fees (also known as capacity fees) is that the costs of providing wastewater service should be paid for by those that receive utility from the product. In order to effect fair distribution of the value of the system, the fee should reflect a reasonable estimate of the cost of providing capacity to new users, and not unduly burden existing users. Accordingly, many utilities make this philosophy one of their primary guiding principles when developing their connection fee structure.

The philosophy that service should be paid for by those that receive utility from the product is often referred to as "growth-should-pay-for-growth." The principal is summarized in the American Water Works Association (AWWA) Manual M26, Water Rates and Related Charges:

The purpose of designing customer-contributed-[connection fees] is to prevent or reduce the inequity to existing customers that results when these customers must pay the increase in water rates that are needed to pay for added plant costs for new customers. Contributed capital reduces the need for new outside sources of capital, which ordinarily has been serviced from the revenue stream. Under a system of contributed capital, many water utilities are able to finance required facilities by use of a 'growth-pays-for-growth' policy.

5.1.2. LEGAL FRAMEWORK

The Authority reserves broad authority over the pricing of wastewater connection fees. The most salient limitation on this authority is the requirement that recovery costs on new development bear a reasonable relationship to the needs and benefits brought about by the development. Courts have long used a standard of reasonableness to evaluate the legality of connection fees. The basic statutory standards governing wastewater connection fees are embodied by Government Code Sections 66013, 66016, 66022 and 66023. Government Code Section 66013, in particular, contains requirements specific to pricing wastewater connection fees:

"Capacity charge" means a charge for public facilities in existence at the time a charge is imposed or 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, including supply or capacity contracts for rights or entitlements, real property interests, and entitlements and other rights of the local agency involving capital expense relating to its use of existing or new public facilities. A "capacity charge" does not include a commodity charge.

Section 66013 also requires that:

- » Local agencies must follow a process set forth in the law, making certain determinations regarding the purpose and use of the fee; they must establish a nexus or relationship between a development project and the public improvement being financed with the fee.

5.1.3. METHODOLOGIES

There are two primary steps in calculating connection fees: (1) determining the cost of capital related to new service connections, and (2) allocating those costs equitably to each connection. There are several available methodologies for calculating connection fees. The various approaches have evolved largely around the basis of changing public policy, legal requirements, and the unique and special circumstances of every local agency. However, there are four general approaches that are widely accepted and appropriate for wastewater connection fees. They are the “system buy-in”, “capacity buy-in”, “incremental-cost” and “hybrid” method.

5.1.3.1. System Buy-in Approach

The system buy-in approach rests on the premise that new customers are entitled to service at the same price as existing customers. However, existing customers have already developed the facilities that will serve new customers. Under this approach, new customers pay only an amount equal to the current system value, either using the original cost or replacement cost as the valuation basis and either netting the value of depreciation or not. This net investment, or value of the system, is then divided by the current demand of the system – number of customers (or equivalent units) – to determine the buy-in cost per EDU.

For example, if the existing system has 100 units of average usage and the new connector uses an equivalent unit, then the new customer would pay 1/100 of the total value of the existing system. By contributing this Connection Fee, the new connector has bought into the existing system. The user has effectively acquired a financial position on par with existing customers and will face future capital challenges on equal financial footing with those customers. This approach is suited for agencies that have capacity in their system and are essentially close to build-out. Figure 5-1 shows the framework for calculating the equity buy-in capacity fee.

Figure 5-1: Formula for Equity Buy-In Approach



5.1.3.1.1. Asset Valuation Approaches

As stated earlier, the first step is to determine the asset value of the capital improvements required to provide services to new users. However, under the system buy-in approach, the facilities have already been constructed, therefore the goal is to determine the value of the existing system/facilities. To estimate the asset value of the existing facilities required to furnish services to new users, various methods are employed. The principal methods commonly used to value a utility's existing assets are original cost and replacement cost.

1. **Original Cost (OC):** The principal advantages of the original cost method lie in its relative simplicity and stability, since the recorded costs of tangible property are held constant. The major criticism levied against original cost valuation pertains to the disregard of changes in the value of money, which are attributable to inflation and other factors. As evidenced by history, prices tend to increase rather than to remain constant. Because the value of money varies inversely with changes in price, monetary values in

most recent years have exhibited a definite decline; a fact not recognized by the original cost approach. This situation causes further problems when it is realized that most utility systems are developed over time on a piecemeal basis as demanded by service area growth. Consequently, each property addition was paid for with dollars of different purchasing power. When these outlays are added together to obtain a plant value the result can be misleading.

2. **Replacement Cost (RC):** Changes in the value of the dollar over time, at least as considered by the impacts of inflation, can be recognized by replacement cost asset valuation. The replacement cost represents the cost of duplicating the existing utility facilities (or duplicating its function) at current prices. Unlike the original cost approach, the replacement cost method recognizes price level changes that may have occurred since plant construction. The most accurate replacement cost valuation would involve a physical inventory and appraisal of plant components in terms of their replacement costs at the time of valuation. However, with original cost records available, a reasonable approximation of replacement cost plant value can most easily be ascertained by trending historical original costs. This approach employs the use of cost indices to express actual capital costs experienced by the utility in terms of current dollars. An obvious advantage of the replacement cost approach is that it gives consideration to changes in the value of money over time.
3. **Original Cost Less Depreciation (OCLD) or Replacement Cost Less Depreciation (RCLD):** Considerations of the current value of utility facilities may also be materially affected by the effects of age and depreciation. Depreciation takes into account the anticipated losses in plant value caused by wear and tear, decay, inadequacy, and obsolescence. To provide appropriate recognition of the effects of depreciation on existing utility facilities, both the original cost and replacement cost valuation measures can also be expressed on an OCLD and RCLD basis. These measures are identical to the aforementioned valuation methods, with the exception that accumulated depreciation is computed for each asset account based upon its age or condition, and deducted from the respective total original cost or replacement cost to determine the OCLD or RCLD measures of plant value.

5.1.3.2. Capacity Buy-In Approach

The capacity buy-in approach is based on the same premise as that for the system buy-in approach – that new customers are entitled to service at the same rates as existing customers. The difference between the two approaches is that for the capacity buy-in approach, for each major asset, the value is divided by its capacity. This approach presents a major challenge as determining the capacity of each major asset may be problematic or not available. The system is designed for peak use and customer behavior fluctuates based on economic and weather conditions. Figure 5-2 shows the framework for calculating a fee based on the Capacity Buy-In Approach.

Figure 5-2: Formula for Capacity Buy-In Approach

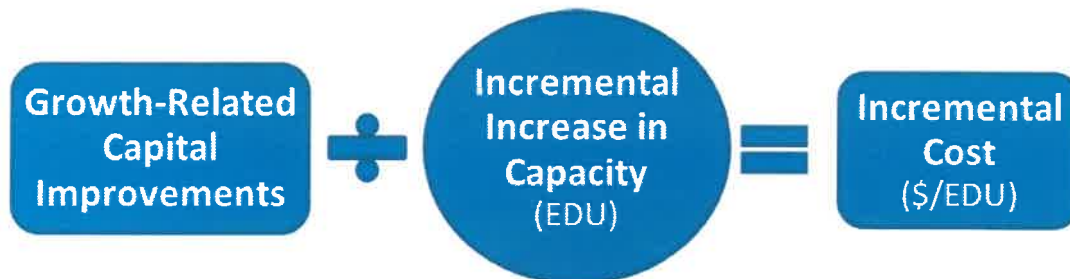


5.1.3.3. Incremental Cost Approach

The incremental method is based on the premise that new development (new users) should pay for the additional capacity and expansions necessary to serve the new development. This method is typically used where there is little or no capacity available to accommodate growth and expansion is needed to service the new development. Under the incremental method, growth-related capital improvements are allocated to new development based on their estimated usage or capacity requirements, irrespective of the value of past investments made by existing customers.

For instance, if it costs X dollars (\$X) to provide 100 additional equivalent units of capacity for average usage and a new connector uses one of those equivalent units, then the new user would pay \$X/100 to connect to the system. In other words, new customers pay the incremental cost of capacity. As with the buy-in approach, new connectors will effectively acquire a financial position that is on par with existing customers. Use of this method is generally considered to be most appropriate when a significant portion of the capacity required to serve new customers must be provided by the construction of new facilities. Figure 5-3 shows the framework for calculating the incremental cost capacity fee.

Figure 5-3: Formula for the Incremental Cost Approach



5.1.3.4. Hybrid Approach

The hybrid approach is typically used where some capacity is available to serve new growth but additional expansion is still necessary to accommodate new development. Under the hybrid approach the Connection Fee is based on the summation of the existing capacity and any necessary expansions.

In utilizing this methodology, it is important that system capacity costs are not double-counted when combining costs of the existing system with future costs from the Capital Improvement Program (CIP). CIP costs associated with repair and replacement of the existing system should not be included in the calculation, unless specific existing facilities which will be replaced through the CIP can be isolated and removed from the existing asset inventory and cost basis. In this case, the rehabilitative costs of the CIP essentially replace the cost of the relevant existing assets in the existing cost basis. Capital improvements that expand system capacity to serve future customers may be included in proportion to the percentage of the cost specifically required for expansion of the system. Figure 5-4 summarizes the framework for calculating the hybrid Connection Fee.

Figure 5-4: Formula for the Hybrid Approach



5.2. Current Connection Fee

The Authority has not updated its Connection Fees since 2014. Therefore, they are no longer reflective of new development's share of the facilities. The Authority utilizes a uniform per EDU Connection Fee that is based on expected demand of one single family residential customer (the equivalent dwelling unit). This translates other customer types to an equivalent number of single-family residential customers. The assumed gallons per day of wastewater flow contributed by one EDU is 200 gallons.

Table 5-1: Current Connection Fee

Description	Connection Fee
1 EDU	\$4,000

5.3. Proposed Connection Fee

The Authority's wastewater system has capacity within the existing system to serve future growth; however, there are also specific growth-related capital projects necessary accommodate new equivalent dwelling units. Therefore, we utilized the hybrid approach.

5.3.1. BUY-IN COMPONENT

The first step in determining the buy-in component of the hybrid connection fee is to determine the value of the existing system. As mentioned above, there are several methods of determining the current value of assets, but, for the purposes of this Study, Replacement Cost was used to account for today's replacement cost for system improvements. This also reflects the approach utilized in the last Connection Fee Study in 2014.

To accomplish this, the Authority provided fixed asset records on the original cost of the system. Replacement cost was then estimated by adjusting original costs to reflect what might be expected if a similar facility were constructed today. This is achieved by escalating the original construction costs by a construction cost index. Engineering News-Record's average Construction Cost Index for 20-cities (ENR CCI) is commonly used for this purpose. It reflects the average costs of a particular basket of construction goods over time. Raftelis used the list year 2018 with an index of 10,985 to inflate the replacement cost of each asset, except land, which was inflated by 2.0-percent.

Table 5-2: System Asset Valuation

Functional Category	Original Cost	Replacement Cost
Land	\$779,136	\$1,383,704
Pipelines	\$67,544,011	\$103,654,409
Buildings	\$146,214,124	\$162,095,292
Buildings and Equipment	\$56,279,649	\$124,331,898
Plant Equipment	\$15,669,080	\$19,191,513
Office Equipment	\$547,438	\$993,462
Vehicles	\$841,568	\$1,204,719
Land Improvements	\$9,738,125	\$12,300,188
Computer Software	\$228,174	\$253,773
Total	\$297,841,305	\$425,408,957

The total system replacement cost represents the estimated cost of replacing the entire system in 2018 dollars. Next, new users will pay their share of any outstanding debt through wastewater rates after joining the system. Therefore, the value of the system in Figure 5-2 should be reduced by the amount of the outstanding principal so that new users are not double-charged for this debt. Table 5-3 shows the resulting net value of the existing system in Line 3 (Line 1 – Line 2). This net value is then divided by the estimated total system capacity of 19.00 MGD, shown in Line Four. This results in the buy-in component per MGD shown in Line Five.

Table 5-3: Buy-In Component (\$/MGD) Calculation

Line No.	Description	Value
1	Total Asset Value (Replacement Cost)	\$425,408,957
2	Less Total Outstanding Debt Principal	\$91,273,216
3	Value of Existing System	\$334,135,741
4	Total System Capacity (MGD)	19.00
5	Buy-in Component (\$/MGD)	\$17,586,092

5.3.2. INCREMENTAL COMPONENT

The incremental component is intended to address the additional capacity and expansions necessary to serve the new development. Table 5-4 indicates the total debt service (principal and interest) allocated to the Capital Fund for the exclusively growth-related portion of capital projects that serve both current and projected expansion customers. In addition, this component includes the exclusively growth-related clarifier upgrades (Line 2). These result in the total capital costs allocated to growth listed in Line 3. This total cost is then divided by the incremental available system capacity of 7.66 million gallons per day (Line 4) to arrive at the Incremental Component (Line 5) of the Connection Fee.

Table 5-4: Incremental Component (\$/MGD) Calculation

Line No.	Description	Value
1	Growth-Related Debt Service	\$39,975,456
2	Additional Growth-Related CIP (Clarifier Upgrades)	\$4,500,000
3	Capital Costs Allocated to Growth	\$44,475,456
4	Incremental System Capacity (MGD)	7.66
5	Incremental Component (\$/MGD)	\$5,806,195

5.3.3. PROPOSED TOTAL CONNECTION FEE

To arrive at the total proposed connection fee, we combine the Buy-in and Incremental Components per MGD derived in Table 5-3 and Table 5-4. This is then converted from \$/MGD to \$/EDU using the assumed 200 GPD for each EDU, resulting in the Proposed Connection Fee in Line 5. The Proposed Connection Fee will remain constant with no adjustments for the entire Study period.

Table 5-5: Proposed FY 2020-2024 per EDU Connection Fee

Line No.	Description	Value
1	Buy-In Component (\$/MGD)	\$17,586,092
2	Incremental Component (\$/MGD)	\$5,806,195
3	Proposed Connection Fee (\$/MGD)	\$23,392,287
4	Assumed GPD per EDU	200
5	Proposed Connection Fee (\$/EDU)	\$4,679

Table 5-6 provides an impact analysis of the proposed Connection Fee over the current Connection fee. The updated fee results in an increase of \$679 per EDU.

Table 5-6: Proposed Connection Fee Impact

Description	Impact
Proposed Connection Fee (\$/EDU)	\$4,679
Current Connection Fee (\$/EDU)	\$4,000
Difference (\$)	\$679
Difference (%)	17.0%



**VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY
Report/Recommendation to the Board of Commissioners**

September 19, 2019

FROM Brian Macy, Interim General Manager
TO Board of Commissioners
SUBJECT First Reading and Eventual Adoption of Ordinance 001 Amendment

RECOMMENDATION

It is recommended that the Board of Commissioners conduct the public hearing and first reading of Ordinance 001 Amendment with eventually adopting it following the second public hearing currently scheduled for October 17, 2019.

REVIEW BY OTHERS

This recommendation was reviewed by Piero Dallarda Legal Counsel.

BACKGROUND INFORMATION

On July 18, 2019, the Board adopted Resolution 2019-10 and the Fiscal Year 2019-2020 Budget which included an 8% increase in user charges on December 1, 2019. This amendment to Ordinance 001 is consistent with Board direction and Resolution 2019-10.

FINANCIAL IMPACT

The financial impact will vary by Member Agency; the proposed rate schedule (Table II) is attached.

RELATED IMPACTS

As a conclusion, this rate increase along with the collection of uncollected revenue will meet the debt coverage ratio of at least 1.2 (computed as net revenue divided by the debt service annual payment amount) to be in compliance with the State Revolving Fund loan agreements.

**AMENDMENT TO
ORDINANCE NO. 001**

WHEREAS, Ordinance No. 001 of the Victor Valley Wastewater Authority (“VWVRA”) adopted by the Board of Commissioners (“Commission”) of VWVRA on October 8, 1980, (also known as Ordinance No. 80-19, establishes and imposes a schedule of user fees for services provided by the collection and treatment system owned, maintained and operated by VWVRA; and

WHEREAS, Article 10, Section 10-01.2 of Ordinance No. 001 and subsequent amendments provide in pertinent part that the Commission reserves the right to change the schedule of regional sewer service charges and other charges and fees from time to time as necessary for the proper operation, maintenance, repair, replacement, and expansion of the regional system and to ensure compliance with regulatory requirements; and

WHEREAS, the funds collected pursuant to Ordinance No. 001 as amended are used to pay for the cost of operating and maintaining the collection and treatment systems owned, maintained and operated by VWVRA and to ensure compliance with regulatory requirements; and

WHEREAS, since the last increase in sewer user charges provided for in Table II of Ordinance No. 001, which is attached hereto as Exhibit “A”, and in Resolutions 1995-14, 2004-9 and 2010-13, the cost of operating and maintaining VWVRA’s sewer-system has increased; and

WHEREAS, absent a sewer user charge increase, VWVRA will incur a deficit due to the costs of operating and maintaining the sewer system exceeding the amount of revenue which VWVRA presently receives in sewer user charges under the existing rate; and

WHEREAS, the Commission believes that it is necessary and desirable to operate the sewer system on a basis which does not require substantial subsidization from other sources of VWVRA revenues; and

WHEREAS, a study conducted on behalf of VWVRA by Raftelis on August 15, 2019, was received, filed and approved by the Commission under Resolution 2019-14 on September 19, 2019 (the “Study”); and

WHEREAS, the Study, a copy of which is attached hereto as Exhibit “B” and incorporated herein by this reference, determined different levels of charges VWVRA would impose up to \$5,150.00 (five thousand, one hundred and fifty dollars) per one million gallons; and

WHEREAS, in light of regulatory requirements as well as costs of operations and maintenance, VWVRA will incur a deficit due to the costs of operating and maintaining the sewer system exceeding the amount of revenue which VWVRA presently receives in sewer user charges under the existing rate; and

sewer system exceeding the amount of revenue which VVWRA presently receives in sewer user charges under the existing rate; and

WHEREAS, (1) after discussing these matters with staff for its member entities, (2) considering studies conducted on behalf of the Commission by consultants; (3) making presentations to staff and the public in open session about the needs to increase the charges mentioned above; and, (4) conducting the necessary notice and public hearing process in the matter, the Commission believes that an increase of the sewer user charges set forth in Sections 2 and 4 below is necessary in light of the findings above.

NOW THEREFORE, the Board of Commissioners of the Victor Valley Wastewater Reclamation Authority hereby ordains as follows:

Section 1. Findings. The Board of Commissioners asserts and adopts the findings set forth above;

Section 2. Increase In Sewer User Charges. The current User Fee Schedule is hereby increased, in terms of volume alone and in terms of monthly charges as follows:

Expressed in terms of millions of gallons, the User Fee Schedule will be increased from \$3,503.00 (three thousand, five hundred and three dollars) per one million gallons to \$3,784.00 (three thousand, seven hundred and eighty-four dollars) per one million gallons effective November 1, 2019.

Expressed in terms of millions of gallons, the User Fee Schedule will be increased from \$3,784.00 (three thousand, seven hundred and eighty-four dollars) per one million gallons to \$4,087.00 (four thousand, and eighty-seven dollars) per one million gallons effective July 1, 2020.

Expressed in terms of millions of gallons, the User Fee Schedule will be increased from \$4,087.00 (four thousand, and eighty-seven dollars) per one million gallons to \$4,414.00 (four thousand, four hundred and fourteen dollars) per one million gallons effective July 1, 2021.

Expressed in terms of millions of gallons, the User Fee Schedule will be increased from \$4,414.00 (four thousand, four hundred and fourteen dollars) per one million gallons to \$4,768.00 (four thousand, seven hundred and sixty-eight dollars) per one million gallons effective July 1, 2022.

Expressed in terms of millions of gallons, the User Fee Schedule will be increased from \$4,768.00 (four thousand, seven hundred and sixty-eight dollars) per one million gallons to \$5,150.00 (five thousand, one hundred and fifty dollars) per one million gallons effective July 1, 2023.

Section 3. Repeal of Table II of Ordinance No. 001 Table II, as referenced in Section 10-01.1 of Ordinance No. 001 as amended by Resolutions 1995-14, 2004-9, 2010-13, Ordinance 001D, and Ordinance 001E is hereby repealed in its entirety.

Section 4. Amendment of Table II of Ordinance No. 001 Table II, as referenced in Section 10-01.1 of Ordinance No. 001, is hereby amended and revised and is incorporated herein by the reference.

Section 5. Repeal of Table III of Ordinance No. 001 Table III, as referenced in the Table of Contents of Ordinance No. 001 as amended by Resolutions 1995-14, 2004-9, 2010-13, Ordinance 001D, and Ordinance 001E is hereby repealed in its entirety, and all references to the 2014 Statement of Findings and Black and Veatch Study shall be removed.

Section 6. Amendment of Table III of Ordinance No. 001 Table III, as referenced in the Table of Contents of Ordinance No. 001, is hereby amended and revised and is incorporated herein by the reference.

Section 7. Continued Effect of Remaining Provisions of Ordinance No. 001. The remaining provisions of Ordinance No. 001 not expressly repealed or amended by this Ordinance shall remain in full force and effect.

Section 8. Effective Date. This Ordinance shall take effect and be in full force thirty (30) days after its adoption. Prior to the expiration of the fifteen (15) days from its adoption, the Ordinance or a summary of it shall be published in The Daily Press, a newspaper of general circulation within the boundaries of the Victor Valley Wastewater Reclamation Authority, or a newspaper of substantially equivalent circulation.

APPROVED AND ADOPTED this 17th day of October 2019.

Scott Nassif
Chair, VVWRA Board of Commissioners

APPROVED AS TO FORM

ATTEST:

Piero C. Dallarda of
Best Best & Krieger LLP
VVWRA General Counsel

Larry Bird
Secretary, VVWRA Board of Commissioners

CERTIFICATION

I, Kristi Casteel, Secretary to the Board of Commissioners (“Commission”) of the Victor Valley Wastewater Reclamation Authority, certify that the foregoing Ordinance was introduced at a regular meeting of the Board of Commissioners on the September 19, 2019, and was adopted by the Commission at a regular meeting held on the October 17, 2019 by the following vote of the Commissioners:

AYES:

NOES:

ABSTAINED:

ABSENT:

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Victor Valley Wastewater Reclamation Authority on this October 17, 2019.

Kristi Casteel
Secretary to the Board of Commissioners

EXHIBIT A

Table II: Fee Schedule

Victor Valley Wastewater Reclamation Authority Fee Schedule

Effective ~~December 1st 2019~~ July 1st 2014

Connection Fees: \$4000 per EDU*

User Charges: Unit Cost (\$/MG)

FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24
\$3,503	\$3,784	\$4,087	\$4,414	\$4,768	\$5,150

High Strength Surcharges:

Refer to the attached worksheet for an example of the calculation used to determine the surcharge rate.

FY 13-14: \$2,528

- BOD \$/LB Applied to Concentrations above 200 mg/L
- TSS \$/LB Applied to Concentrations above 250 mg/L
- NH3 \$/LB Applied to Concentrations above 250 mg/L

FY 14-15: \$2,756

- BOD \$/LB Applied to Concentrations above 200 mg/L
- TSS \$/LB Applied to Concentrations above 250 mg/L
- NH3 \$/LB Applied to Concentrations above 250 mg/L

FY 15-16: \$3,004

- BOD \$/LB Applied to Concentrations above 200 mg/L
- TSS \$/LB Applied to Concentrations above 250 mg/L
- NH3 \$/LB Applied to Concentrations above 250 mg/L

FY 16-17: \$3,274

- BOD \$/LB Applied to Concentrations above 200 mg/L
- TSS \$/LB Applied to Concentrations above 250 mg/L
- NH3 \$/LB Applied to Concentrations above 250 mg/L

FY 17-18: \$3,503

- BOD \$/LB Applied to Concentrations above 200 mg/L
- TSS \$/LB Applied to Concentrations above 250 mg/L
- NH3 \$/LB Applied to Concentrations above 250 mg/L

FY 15-16: \$3,004

- BOD \$/LB \$0.2754 Applied to Concentrations above 200
- TSS \$/LB \$0.2444 Applied to Concentrations above 250
- NH3 \$/LB \$3.4596 Applied to Concentrations above 250

FY 16-17: \$3,274

- BOD \$/LB \$0.3002 Applied to Concentrations above 200
- TSS \$/LB \$0.2664 Applied to Concentrations above 250
- NH3 \$/LB \$3.7710 Applied to Concentrations above 250

FY 17-18: \$3,503**BOD** \$/LB **\$0.3212** Applied to Concentrations above 200**TSS** \$/LB **\$0.2850** Applied to Concentrations above 250**NH3** \$/LB **\$4.0350** Applied to Concentrations above 250**FY 18-19: \$3,503****BOD** \$/LB **\$0.3685** Applied to Concentrations above 200**TSS** \$/LB **\$0.2470** Applied to Concentrations above 250**NH3** \$/LB **\$4.1368** Applied to Concentrations above 250**FY 19-20: \$3,784****BOD** \$/LB **\$0.3685** Applied to Concentrations above 200**TSS** \$/LB **\$0.2470** Applied to Concentrations above 250**NH3** \$/LB **\$4.1368** Applied to Concentrations above 250**Septage Receiving Fee: \$.0936 per gallon*****EDU=Equipment Dwelling Unit (245 gallons/day or 20 fixture units)**

Victor Valley Wastewater Reclamation Authority
High Strength Surcharge
Example Worksheet

Procedure to Determine Annual Surcharge Fee

FOR EXAMPLE ONLY

User Charges from Member Agencies \$ 10,112,000
 Unit User Charge per MG \$2,528.00
 Estimated Treatment Flow (MG) 4,000

	Influent mg/l	Influent lbs/day	Effluent mg/l	Effluent lbs/day	Removal lbs/day	Removal lb/year	Percent of Cost	Removal Cost/lb	Unit Cost \$
FOR EXAMPLE ONLY									
BOD	400.00	36,559	4.00	366	36,193	13,210,560	35.0%	\$3,539,200	\$0.2679
TSS	300.00	27,419	2.21	202	27,217	9,934,274	25.0%	\$2,528,000	\$0.2545
NH3	30.00	2,742	0.10	9	2,733	997,464	30.0%	\$3,033,600	\$3.0413
Annual Flow - MG per Day		4,380 MG / 365 days		10.96					
							10.0%	\$1,011,200	
							100.0%	\$10,112,000	

FOR EXAMPLE ONLY

Surcharge Rates:
 Applied to Concentrations Above:

	BOD \$/lb	TSS \$/lb	NH3 \$/lb
	\$0.2679	\$0.2545	\$3.0413
	200 mg/l	250 mg/l	20 mg/l

FORMULAS

lbs/day = flow (mgd) x concentration (mg/l) x weight of water (8.34 lbs/gal)

BOD

Influent (flow mgd) x (influent mg/l) x 8.34 lbs/gal = lbs/day
 Effluent (flow mgd) x (effluent mg/l) x 8.34 lbs/gal = lbs/day

TSS

Influent (flow mgd) x (influent mg/l) x 8.34 lbs/gal = lbs/day
 Effluent (flow mgd) x (effluent mg/l) x 8.34 lbs/gal = lbs/day

NH3

Influent (flow mgd) x (influent mg/l) x 8.34 lbs/gal = lbs/day
 Effluent (flow mgd) x (effluent mg/l) x 8.34 lbs/gal = lbs/day

REMOVAL

Per day: Influent lb/day - Effluent lb/day = Removal lb/day
 Per year: Removal lb/day x 365 = Removal lb/year

REMOVAL COST

Per lb: Total user cost x 35% = Removal cost/lb
 Per unit: Removal cost/lb / Removal lb/year

Note:

1. BOD, Biochemical Oxygen Demand, use the annual average from the prior year Annual Discharge Monitoring Report
2. TSS, Total Suspended Solids, use the annual average from the prior year Annual Discharge Monitoring Report
3. NH3, Ammonia, use the annual average from the prior year Annual Discharge Monitoring Report
4. MG, Flow in Million Gallons budgeted for upcoming Fiscal Year

Procedure to Determine Annual Surcharge Fee

FOR EXAMPLE ONLY

User Charges from Member Agencies \$ 10,112,000
 Unit User Charge per MG \$2,528.00
 Estimated Treatment Flow (MG) 4,000

	Influent mg/l	Influent lbs/day	Effluent mg/l	Effluent lbs/day	Removal lbs/day	Removal lbs/year	Percent of Cost	Removal Cost/lb	Unit Cost \$
FOR EXAMPLE ONLY									
BOD	400.00	36,539	4.00	366	36,193	13,210,560	33.0%	\$3,539,200	\$0.2679
TSS	300.00	27,419	2.21	202	27,217	9,934,274	25.0%	\$2,528,000	\$0.2545
NH3	30.00	2,742	0.10	9	2,733	997,464	30.0%	\$3,033,600	\$3.0413
Annual Flow - MG per Day		4,380 MG / 365 days		10.96					
							10.0%	\$1,011,200	
							100.0%	\$10,112,000	

FOR EXAMPLE ONLY

Surcharge Rates:
 Applied to Concentrations Above:

	BOD \$/lb	TSS \$/lb	NH3 \$/lb
	\$0.2679	\$0.2545	\$3.0413
	200 mg/l	250 mg/l	10 mg/l

FORMULAS

lbs/day = flow (mgd) x concentration (mg/l) x
 weight of water (8.34 lbs/gal)

BOD

Influent (flow mgd) x (influent mg/l) x 8.34 lbs/gal = lbs/day
 Effluent (flow mgd) x (effluent mg/l) x 8.34 lbs/gal = lbs/day

TSS

Influent (flow mgd) x (influent mg/l) x 8.34 lbs/gal = lbs/day
 Effluent (flow mgd) x (effluent mg/l) x 8.34 lbs/gal = lbs/day

NH3

Influent (flow mgd) x (influent mg/l) x 8.34 lbs/gal = lbs/day
 Effluent (flow mgd) x (effluent mg/l) x 8.34 lbs/gal = lbs/day

REMOVAL

Per day: Influent lb/day - Effluent lb/day = Removal lbs/day
 Per year: Removal lb/day x 365 = Removal lb/year

REMOVAL COST

Per lb: Total user cost x 35% = Removal cost/lb
 Per unit: Removal cost/lb / Removal lb/year

Note:

1. BOD, Biochemical Oxygen Demand, use the annual average from the prior year Annual Discharge Monitoring Report
2. TSS, Total Suspended Solids, use the annual average from the prior year Annual Discharge Monitoring Report
3. NH3, Ammonia, use the annual average from the prior year Annual Discharge Monitoring Report
4. MG, Flow in Million Gallons budgeted for upcoming Fiscal Year

EXHIBIT B

VICTOR VALLEY

WASTEWATER RECLAMATION AUTHORITY

2019 Wastewater Rate Study and Connection Fee Update

Final Report / August 19, 2019





August 19, 2019

Chieko Keagy
 Controller
 Victor Valley Wastewater Reclamation Authority
 20111 Shay Road
 Victorville, CA 92394

Subject: 2019 Wastewater Rate Study and Connection Fee Update Report

Dear Ms. Keagy,

Raftelis is pleased to provide this 2019 Wastewater Rate Study and Connection Fee Update Report for the Victor Valley Wastewater Reclamation Authority (Authority). The contents of this Report include a financial plan for the Authority for fiscal year (FY) 2020 to FY 2024, proposed user charges over the same timeframe, as well as updated connection fees.

The major objectives of the study include the following:

- » Develop a five-year financial plan through FY 2024 to ensure financial sufficiency, meet operating costs, ensure sufficient funding to meet debt obligations, and fund necessary capital expenditures
- » Propose updated user charge rates for FY 2020 to FY 2024
- » Update the prior connection fee calculation methodology and develop proposed connection fees that are justifiable and fair to both new and existing users of the Authority's wastewater system.

This Report summarizes the key findings and recommendations related to the development of the financial plan, the associated user charges, and the updated connection fee. It has been a pleasure working with you and we thank you, Xiwei Wang, and other Authority staff for the support provided during this study.

Sincerely,

RAFTELIS FINANCIAL CONSULTANTS, INC.

Sanjay Gaur
 Vice President

Charles Diamond
 Consultant

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1. Executive Summary

1.1. Background of the Study

The Victor Valley Wastewater Reclamation Authority (Authority) is a Joint Power public agency of the State of California formed in 1977 to maintain compliance with the Federal Clean Water Act and to provide wastewater treatment within a 279 square mile service area in San Bernardino County. The primary function of the Authority is to receive and treat wastewater from the four member agencies listed below:

- » Town of Apple Valley
- » City of Hesperia
- » City of Victorville
- » County of San Bernardino Special District Service Areas No. 42 (Oro Grande) and No. 64 (Spring Valley Lake)

The Authority is governed by a Board of Commissioners that consists of four elected officials representing each member agency listed above. The Authority operates a Regional Wastewater Treatment Plant with 17 million gallons per day (MGD) of treatment capacity in the City of Victorville. Additionally, the Authority completed construction in April 2018 of two Sub-regional Wastewater Reclamation Plants with 1 MGD of treatment capacity each in the Town of Apple Valley and the City of Hesperia. Wastewater treated by the Authority is either discharged to the Mojave River or utilized as recycled water for irrigative use after undergoing an extensive cleaning and purification process.

The Authority engaged Raftelis in 2018 to conduct a wastewater rate study and connection fee update (Study). The purpose of the Study is to update the Authority's financial plan, user charges, and connection fees. User charges assessed per million gallons (MG) of billed wastewater flows and one-time connection fees assessed per equivalent dwelling unit (EDU) of new development constitute the vast majority of the Authority's annual revenues. Therefore, both user charges and connection fees must be appropriately set to ensure the financial sufficiency of the Authority in manner that is equitable across member agencies.

The Authority last conducted a Financial Plan Update Study and Connection Fee Study in 2014. These prior studies established proposed user charges and connection fees through fiscal year (FY) 2018.¹ Since these prior studies were completed in 2014, unanticipated circumstances have significantly impacted the Authority's financial situation. Firstly, the service area has experienced slower growth from new development than what was anticipated in the 2014 studies. Consequently, lower revenues from user charges and connection fees have been collected compared to projections from the prior financial plan. Additionally, a flow diversion by the City of Victorville and non-payment of connection fees by the City of Hesperia have critically impacted the Authority's financial situation in an adverse manner.

This Study was conducted in order to develop an updated financial plan that accounts for the aforementioned financial challenges which have emerged since the prior studies were conducted in 2014, and to develop updated user charges and connection fees that enhance the financial stability of the Authority. All analyses, results, and recommendations related to this Study are outlined in this Wastewater Rate Study and Connection Fee Update Report (Report).

¹ The Authority's fiscal year spans from July 1 of the prior calendar year to June 30 of the concurrent calendar year. For example, FY 2018 spanned from July 1, 2017 to June 30, 2018.

Given these considerations, the major objectives of this Study include the following:

1. Develop an updated five-year financial plan through FY 2024 to ensure financial sufficiency, meet operating costs, ensure sufficient funding to meet debt obligations, and fund necessary capital expenditures;
2. Develop proposed user charges rates for FY 2020 to FY 2024; and
3. Update the prior connection fee calculation methodology and develop proposed connection fees that are justifiable and fair to both new and existing users of the Authority's wastewater system.

1.2. Results and Recommendations

1.2.1. FINANCIAL PLAN

For this Study, Raftelis and the Authority examined three different financial planning scenarios. The Status Quo Scenario provided the Authority an understanding of the adequacy of current User Charges and Connection Fees in funding the Authority's expenses and debt obligations. Scenario 1, which is not recommended by Raftelis but approved by the Authority's Board of Commissioners, is an alternative revenue adjustment schedule that neither meets the Authority's revenue requirements nor its debt coverage requirements. Note that it incorporates the proposed Connection Fees discussed in Section 5. Scenario 2 presents Raftelis' recommended financial plan and required revenue adjustments in order to adequately meet the Authority's O&M, capital, and debt service expenses as well as meeting its required debt coverage ratio. As with Scenario 1, Scenario 2 incorporates the proposed Connection Fees rather than the current fees. Table 1-1 summarizes the different scenarios examined for this study.

Table 1-1: FY 2020-2024 Scenario Revenue Adjustment Comparison

Description	Connection Fees	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative Increase
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023	
Status Quo	Current	0%	0%	0%	0%	0%	0%
Scenario 1 (Approved)	Proposed	8%	8%	8%	8%	8%	46.9%
Scenario 2 (Raftelis Recommended)	Proposed	25%	2.5%	2.5%	2.5%	2.5%	38.0%

Figure 1-1: Scenario 1 O&M/R&R Fund Financial Plan Figure 1-1 illustrates Scenario 1's inability to meet the Authority's O&M and R&R capital expenses and the significant reliance on reserves to meet the Authority's costs for most of the Study Period. As a result of this depletion of reserves, the Authority is unable to meet its combined reserve targets as well as unable to meet its SRF Loan Reserve Requirement (Figure 1-2). As mentioned above, Scenario 1 also results in the Authority not meeting its debt coverage requirements in FY 2020 and FY 2021, as illustrated in Figure 1-3. It is for these reasons that Raftelis cannot recommend this scenario.

Figure 1-1: Scenario 1 O&M/R&R Fund Financial Plan

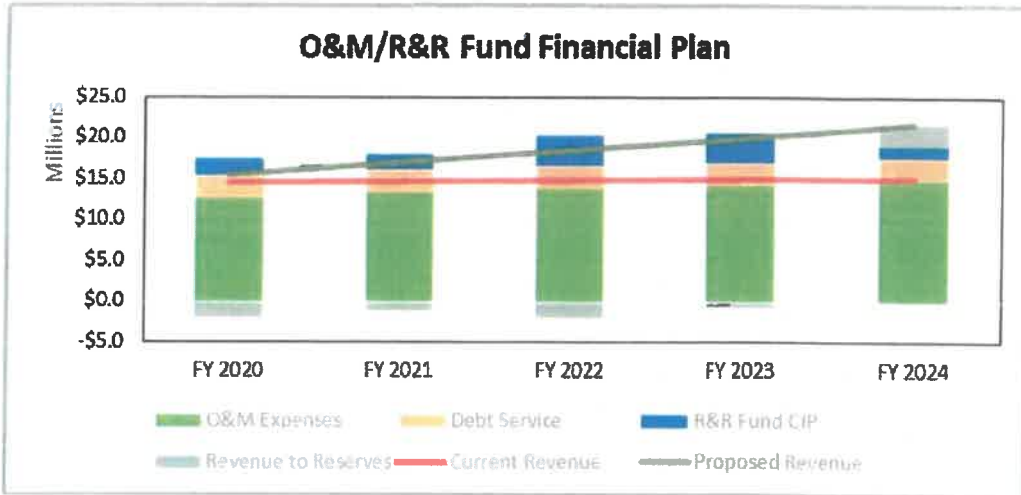


Figure 1-2: Scenario 1 Total Fund Balance

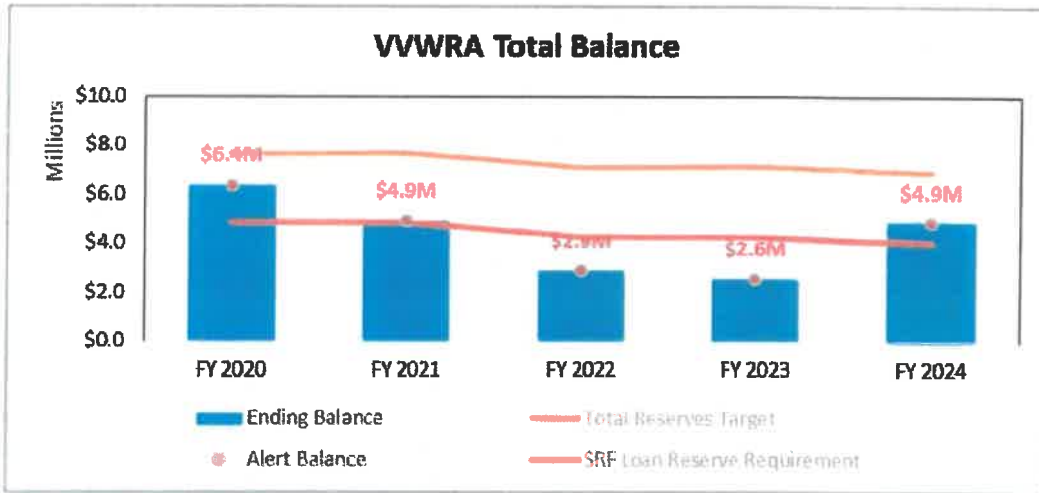
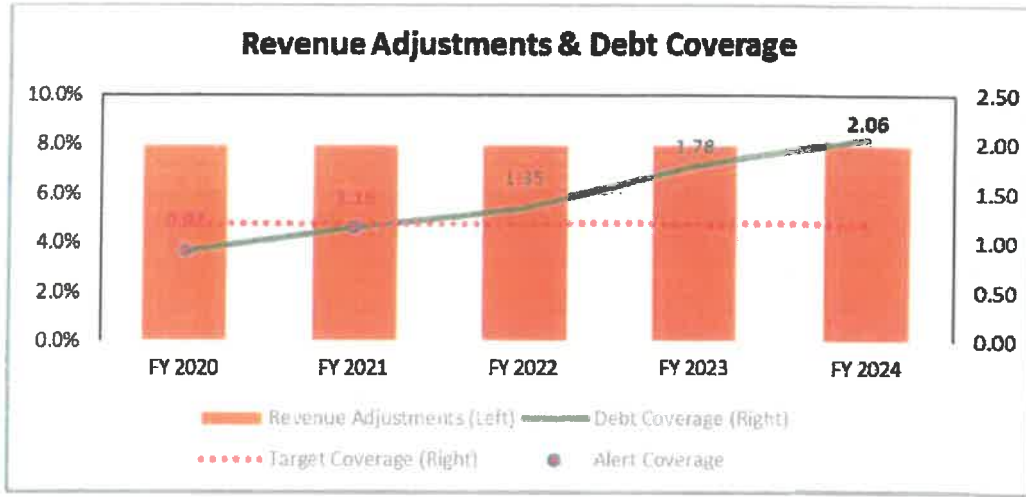


Figure 1-3: Scenario 1 Debt Coverage



In contrast, while Scenario 2 requires some reliance on reserves, it does meet the SRF Reserve Requirement and the debt coverage requirement for the entire Study period. In order to fully fund expenses through rate revenue and not rely on reserves at all, the Authority would have to utilize greater revenue adjustments than proposed in Scenario 2. Figure 1-4, Figure 1-5, and Figure 1-6 show how the Authority meets its obligations while sufficiently funding its expenses.

Figure 1-4: Scenario 2 O&M/R&R Fund Financial Plan

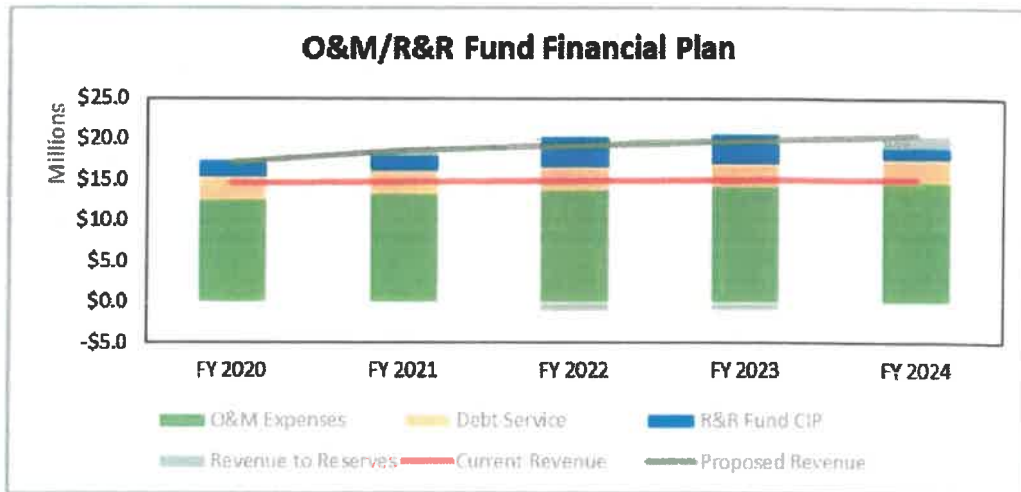


Figure 1-5: Scenario 2 Total Fund Balance

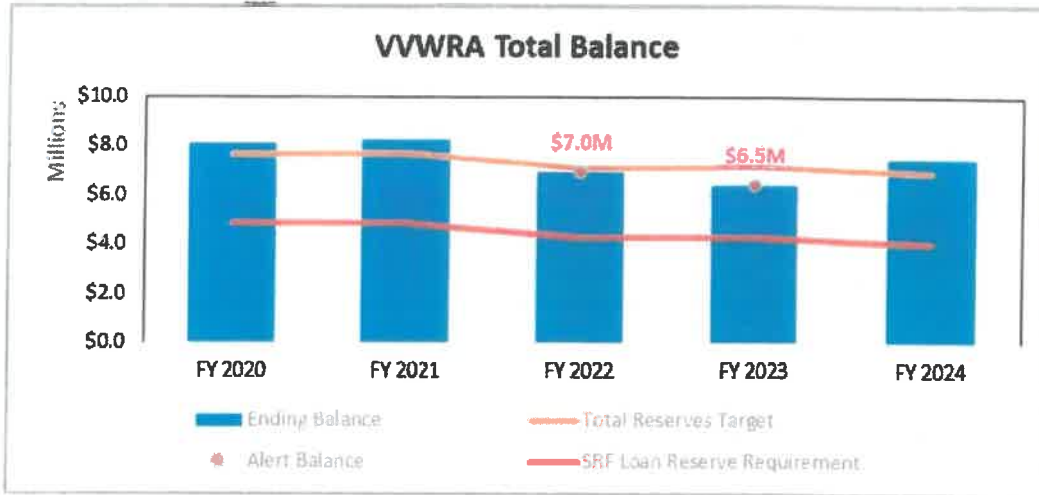
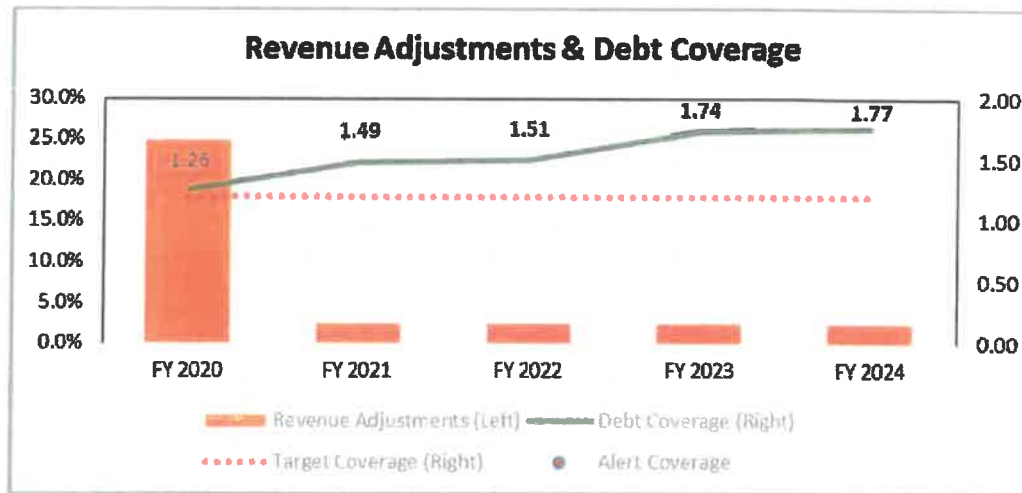


Figure 1-6: Scenario 2 Debt Coverage



1.2.2. PROPOSED USER CHARGES

Proposed User Charges are calculated by simply increasing the prior year's rates by the proposed revenue adjustments from Table 1-1. Error! Reference source not found. shows proposed user charges in each year throughout the Study Period for Scenario 1 and Scenario 2.

Table 1-2: Proposed User Charges (per MG)

Description	Current FY 2019	Proposed FY 2020	Proposed FY 2021	Proposed FY 2022	Proposed FY 2023	Proposed FY 2024
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023
Scenario 1 (Approved)	\$3,503	\$3,784	\$4,087	\$4,414	\$4,768	\$5,150
Scenario 2 (Raftelis Recommended)	\$3,503	\$4,379	\$4,489	\$4,602	\$4,718	\$4,836

1.2.3. UPDATED CONNECTION FEES

The Authority has not updated its Connection Fees since 2014. Therefore, they are no longer reflective of new development's share of the facilities. The Authority utilizes a uniform per EDU Connection Fee that is based on expected demand of one single family residential customer (the equivalent dwelling unit). This translates other customer types to an equivalent number of single-family residential customers. The assumed gallons per day of wastewater flow contributed by one EDU is 200 gallons.

Table 1-3: Current Connection Fee

Description	Connection Fee
1 EDU	\$4,000

The Authority's wastewater system has capacity within the existing system to serve future growth; however, there are also specific growth-related capital projects necessary accommodate new equivalent dwelling units. Therefore, we utilized the hybrid approach. Section 5 provides the detailed calculation of the buy-in and incremental components combined to arrive at the proposed Connection Fee. Table 1-4 shows the resulting proposed Connection Fee per equivalent dwelling unit (EDU) in comparison to the current Connection Fee.

Table 1-4: Proposed Connection Fee Impact

Description	Impact
Proposed Connection Fee (\$/EDU)	\$4,679
Current Connection Fee (\$/EDU)	\$4,000
Difference (\$)	\$679
Difference (%)	17.0%

2. Introduction

2.1. Background of the Study

The Victor Valley Wastewater Reclamation Authority (the Authority) is a Joint Power public agency of the State of California formed in 1977 to maintain compliance with the Federal Clean Water Act and to provide wastewater treatment within a 279 square mile service area in San Bernardino County. The primary function of the Authority is to receive and treat wastewater from the four member agencies listed below:

- » Town of Apple Valley
- » City of Hesperia
- » City of Victorville
- » County of San Bernardino Special District Service Areas No. 42 (Oro Grande) and No. 64 (Spring Valley Lake)

The Authority is governed by a Board of Commissioners that consists of four elected officials representing each member agency listed above. The Authority operates a Regional Wastewater Treatment Plant with 17 million gallons per day (MGD) of treatment capacity in the City of Victorville. Additionally, the Authority completed construction in April 2018 of two Sub-regional Wastewater Reclamation Plants with 1 MGD of treatment capacity each in the Town of Apple Valley and the City of Hesperia. Wastewater treated by the Authority is either discharged to the Mojave River or utilized as recycled water for irrigative use after undergoing an extensive cleaning and purification process.

The Authority engaged Raftelis in 2018 to conduct a wastewater rate study and connection fee update (Study). The purpose of the Study is to update the Authority's financial plan, user charges, and connection fees. User charges assessed per million gallons (MG) of billed wastewater flows and one-time connection fees assessed per equivalent dwelling unit (EDU) of new development constitute the vast majority of the Authority's annual revenues. Therefore, both user charges and connection fees must be appropriately set to ensure the financial sufficiency of the Authority in manner that is equitable across member agencies.

The Authority last conducted a Financial Plan Update Study and Connection Fee Study in 2014. These prior studies established proposed user charges and connection fees through fiscal year (FY) 2018.² Since these prior studies were completed in 2014, unanticipated circumstances have significantly impacted the Authority's financial situation. Firstly, the service area has experienced slower growth from new development than what was anticipated in the 2014 studies. Consequently, lower revenues from user charges and connection fees have been collected compared to projections from the prior financial plan. Additionally, a flow diversion by the City of Victorville and non-payment of connection fees by the City of Hesperia have critically impacted the Authority's financial situation in an adverse manner.

This Study was conducted in order to develop an updated financial plan that accounts for the aforementioned financial challenges which have emerged since the prior studies were conducted in 2014, and to develop updated user charges and connection fees that enhance the financial stability of the Authority. All analyses, results, and recommendations related to this Study are outlined in this Wastewater Rate Study and Connection Fee Update Report (Report).

² The Authority's fiscal year spans from July 1 of the prior calendar year to June 30 of the concurrent calendar year. For example, FY 2018 spanned from July 1, 2017 to June 30, 2018.

Given these considerations, the major objectives of this Study include the following:

4. Develop an updated five-year financial plan through FY 2024 to ensure financial sufficiency, meet operating costs, ensure sufficient funding to meet debt obligations, and fund necessary capital expenditures;
5. Develop proposed user charges rates for FY 2020 to FY 2024; and
6. Update the prior connection fee calculation methodology and develop proposed connection fees that are justifiable and fair to both new and existing users of the Authority's wastewater system.

3. Key Assumptions

The Study period is from FY 2020 to 2024. The Study is based on the FY 2020 budget inflated annually to forecast changes in costs. Various types of assumptions and inputs were incorporated into the Study based on directions from Authority staff. The cost escalation factors are shown in Table 3-1. The general inflation rate of 3% is based on a historical Consumer Price Index (CPI) range of 3-3.5%. All other inflationary assumptions were determined based on Authority staff estimates.

Table 3-1: Cost Escalation Factors

Inflationary Category	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
General	3.0%	3.0%	3.0%	3.0%	3.0%
Salaries	3.0%	3.0%	3.0%	3.0%	3.0%
Benefits	5.0%	5.0%	5.0%	5.0%	5.0%
Utilities	3.0%	3.0%	3.0%	3.0%	3.0%
Capital	3.1%	3.1%	3.1%	3.1%	3.1%
Non-Inflated	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Recurring	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%
Combined Salary/Benefits	3.0%	3.0%	3.0%	3.0%	3.0%

The Authority does not expect to serve any additional agencies over its current customer base during the Study period. However, across its member agencies, they expect the addition of 500 equivalent dwelling units (EDUs) per fiscal year. This incremental increase (Table 3-2, Line 1) will both provide the Authority with additional connection fee revenues and slightly increase wastewater flows annually during the Study period (Line 2). The Authority does not expect water conservation to affect wastewater flows during the Study period (Line 3). The resulting projected flows in million gallons (MG) are shown in Line 4.

Table 3-2: System Demand Assumptions

Line	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Incremental Increase in EDUs	500	500	500	500	500
2	Annual Growth in Billed Wastewater Flows	0.59%	0.80%	0.80%	0.80%	0.80%
3	Water Conservation Factor	100%	100%	100%	100%	100%
4	Total Billed Wastewater Flows (MG)	3,900	3,931	3,963	3,994	4,026

4. Financial Plan Development

4.1. Operating & Maintenance Expenses

The Authority's combined Operating and Maintenance (O&M) expenses are shown in Table 4-1. The FY 2020 budget is inflated according to the inflationary factors shown in Section 3. Personnel Expenses include salaries, CALPERS benefits, and insurance. Maintenance Expenses includes costs such as vehicle repairs, maintaining safety equipment, and grounds maintenance. Operations Expenses encompass costs such as utility bills, wastewater treatment costs, and lab supplies. Administrative Expenses include office supplies, legal services, and permits & professional fees. Note that Construction Expenses consist of other interest expenses and are not capital improvements themselves.

Table 4-1: Budgeted and Projected Water O&M Expenses

Description	FY 2020 Budgeted	FY 2021 Projected	FY 2022 Projected	FY 2023 Projected	FY 2024 Projected
Personnel Expenses	\$4,974,695	\$5,481,876	\$5,687,015	\$5,890,914	\$6,102,583
Maintenance Expenses	\$2,864,482	\$2,950,416	\$3,038,929	\$3,130,097	\$3,224,000
Operations Expenses	\$3,433,685	\$3,556,645	\$3,684,056	\$3,816,082	\$3,952,891
Administration Expenses	\$1,822,648	\$1,877,327	\$1,933,647	\$1,991,657	\$2,051,406
Construction Expenses	\$10,957	\$10,957	\$10,957	\$10,957	\$10,957
Total	\$13,106,467	\$13,877,222	\$14,354,605	\$14,839,707	\$15,341,837

4.2. Debt Service Obligations

Table 4-2 lists the Authority's annual debt service for the Study period. The debt obligation for both the 9.5 MGD Capital Improvements and 11 MGD Expansion of the treatment plant will be fulfilled during the Study period (FY 2020 and FY 2022 respectively). Additionally, the Authority does not intend to incur any new debt during the Study period.

Table 4-2: Annual Debt Service

Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Current Debt					
9.5 MGD Capital Improvements	\$265,049	\$0	\$0	\$0	\$0
11 MGD Expansion	\$579,870	\$579,870	\$579,870	\$0	\$0
North Apple Valley Interceptor	\$258,151	\$258,151	\$258,151	\$258,151	\$258,151
Phase IIIA Regulatory Upgrades	\$1,027,610	\$1,027,610	\$1,027,610	\$1,027,610	\$1,027,610
Upper Narrows Replacement	\$257,745	\$257,745	\$257,745	\$257,745	\$257,745
Nanticoke Bypass	\$271,633	\$271,633	\$271,633	\$271,633	\$271,633
Apple Valley Sub-Regional	\$1,024,951	\$1,024,951	\$1,024,951	\$1,024,951	\$1,024,951
Hesperia Subregional	\$1,462,850	\$1,462,850	\$1,462,850	\$1,462,850	\$1,462,850
Total Current Debt	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940
Proposed Debt					
	\$0	\$0	\$0	\$0	\$0
Total Debt Service	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940

4.3. Capital Improvement Plan

Table 4-3 lists the Authority's capital improvement plan (CIP) for the Study period. The Authority intends to fully fund its CIP for the Study period through User Charge and Connection Fee Revenues. User Charge revenues (O&M/R&R Fund) will fund capital repair and replacement projects, while the Connection Fee revenues (Capital Fund) will fund new capital projects.

Table 4-3: FY 2020-2024 Capital Improvement Plan

Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Digester 4&5 Dome Repair and Misc. Mechanical	\$325,000	\$386,660	\$0	\$0	\$0
Digester 4&5 Dome Repair and Misc. Mechanical	\$50,000	\$0	\$0	\$0	\$0
SCADA Upgrade Project (Ignition)	\$0	\$143,322	\$0	\$0	\$0
Coating Project: UV and DAFTS	\$425,000	\$0	\$0	\$0	\$0
Digital Information Management System (DIMS)	\$0	\$61,866	\$0	\$0	\$0
Headworks Replacement	\$50,000	\$154,664	\$212,631	\$3,288,628	\$0
Oro Grande Interceptor First Priority - possible USDA grant	\$150,000	\$103,109	\$2,498,409	\$0	\$0
Ossum Wash	\$0	\$670,210	\$0	\$0	\$0
R4B South Lower Narrows	\$0	\$0	\$0	\$0	\$0
Interceptor Risk Assessment Report	\$50,000	\$0	\$0	\$0	\$0
Programmable Logic Control (PLC) Replacement	\$400,000	\$0	\$0	\$0	\$0
Programmable Logic Control (PLC) Replacement	\$55,000	\$0	\$0	\$0	\$0
Fleet Replacement	\$100,000	\$0	\$0	\$0	\$0
Network Re-design and updates	\$100,000	\$51,555	\$0	\$0	\$0
Network Re-design and updates	\$35,000	\$0	\$0	\$0	\$0
Main Switch Board Upgrade/Replacement	\$0	\$0	\$372,103	\$0	\$0
Motor Control Center (MCC) - Aqua Diamonds	\$0	\$170,130	\$0	\$0	\$0
UV Generator Tie-in to South Perc. Pond PS	\$0	\$0	\$398,682	\$0	\$0
Micro-grid/Battery Storage Project	\$0	\$0	\$0	\$0	\$0
Storm Water Spill Containment System	\$400,000	\$0	\$0	\$0	\$0
Digester 1-5 Engineering Services	\$50,000	\$20,622	\$0	\$0	\$0
Golf Cart Recharging Station	\$0	\$15,466	\$0	\$0	\$0
Operations Building Extension	\$0	\$206,219	\$0	\$0	\$0
Digesters 4 and 5 Supernatant Line	\$0	\$77,332	\$0	\$0	\$0
Upgrades to AV WRP	\$100,000	\$0	\$0	\$0	\$0
R4A North Lower Narrows MH 3-1 to MH 3-3	\$0	\$51,555	\$106,315	\$54,810	\$1,895,502
R7 Old Town VV MH 4-24 to MH 4-25A	\$0	\$0	\$0	\$109,621	\$113,029
R5 Cemex MH 4-7 to 4-14	\$0	\$0	\$53,158	\$109,621	\$113,029
R4B South Lower Narrows	\$0	\$0	\$0	\$0	\$0
Solids Dewatering and Side Stream Study	\$50,000	\$0	\$0	\$0	\$0
Capitalized Pump Expenses	\$288,000	\$123,731	\$127,578	\$131,545	\$135,635
Total	\$2,628,000	\$2,236,441	\$3,768,876	\$3,694,225	\$2,257,196

Figure 4-1 and Figure 4-2 show total CIP by funding source for the Authority's R&R Fund and Capital Fund respectively. R&R Fund CIP includes projects required to maintain the existing wastewater system, while Capital Fund CIP includes CIP projects required to serve future new connections to the wastewater system.

Figure 4-1: FY 2020-2024 O&M/R&R Fund Capital Financing Plan

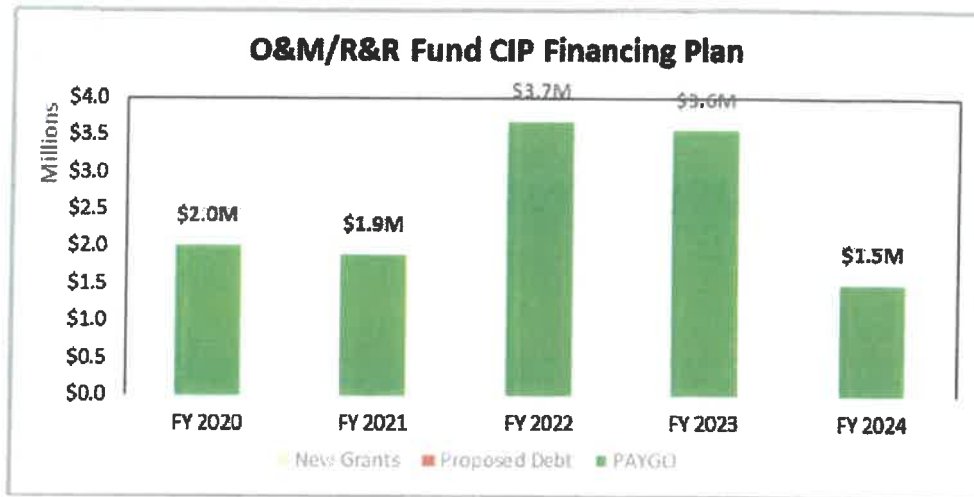
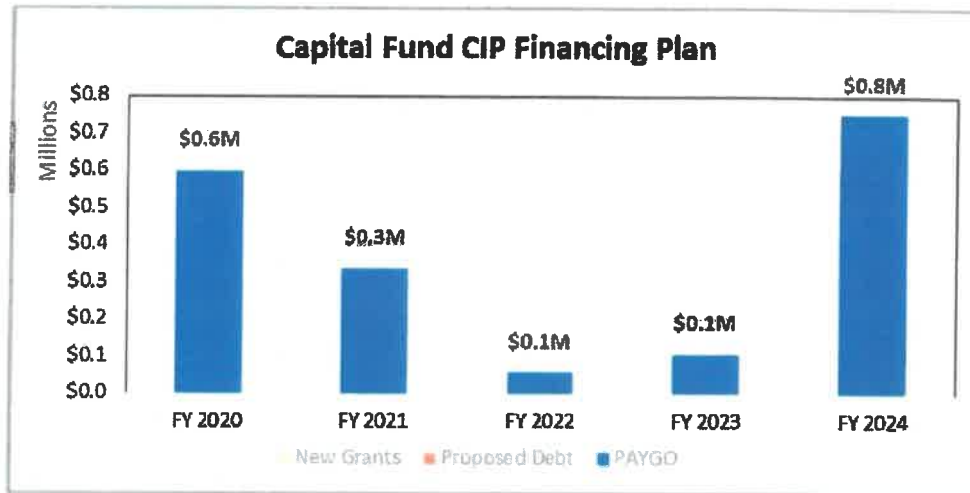


Figure 4-2: FY 2020-2024 CIP Fund Capital Financing Plan



4.4. Financial Planning Scenarios

For this Study, Raftelis and the Authority examined three different financial planning scenarios. The Status Quo Scenario provided the Authority an understanding of the adequacy of current User Charges and Connection Fees in funding the Authority’s expenses and debt obligations. Scenario 1, which is not recommended by Raftelis but approved by the Authority’s Board of Commissioners, is an alternative revenue adjustment schedule that neither meets the Authority’s revenue requirements nor its debt coverage requirements. Note that it incorporates the proposed Connection Fees discussed in Section 5. Scenario 2 presents Raftelis’ recommended financial plan and required revenue adjustments in order to adequately meet the Authority’s O&M, capital, and debt service expenses as well as meeting its required debt coverage ratio. As with Scenario 1, Scenario 2 incorporates the proposed Connection Fees rather than the current fees. Table 4-4 summarizes the different scenarios examined for this study.

Table 4-4: FY 2020-2024 Scenario Revenue Adjustment Comparison

Description	Connection Fees	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative Increase
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023	
Status Quo	Current	0%	0%	0%	0%	0%	0%
Scenario 1 (Approved)	Proposed	8%	8%	8%	8%	8%	46.9%
Scenario 2 (Raftelis Recommended)	Proposed	25%	2.5%	2.5%	2.5%	2.5%	38.0%

4.4.1. STATUS QUO FINANCIAL PLAN (NO REVENUE INCREASE)

The Status Quo financial plan projects the Authority's ability to meet its expenses under current User Charges, which have not been increased since FY 2018. In this section, we calculate revenue under the current User Charges and examine how well it meets the Authority's revenue requirement.

4.4.1.1. Projected Revenues Under Current Rates

The current user charge has been in place since FY 2018, with the previous study conducted in calendar year 2014. Currently, all member agencies pay a flat user charge of \$3,503 per MG of flow into the system. Revenues from the User Charge are calculated by multiplying this charge by the total projected wastewater flows shown in Line 4 of Table 3-2.

Table 4-5: FY 2020-2024 Projected Revenues from Current User Charge

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
User Charge	\$3,503	\$3,503	\$3,503	\$3,503	\$3,503
Total Billed Wastewater Flows (MG)	3,900	3,931	3,963	3,994	4,026
Total User Charge Revenue	\$13,661,700	\$13,770,994	\$13,881,162	\$13,992,211	\$14,104,149

As mentioned in Section 3, the Authority expects that 500 additional units will be added each year between the four member agencies. The Authority charges a Connection Fee for each added EDU. When a wastewater treatment system is developed, it requires significant infrastructure investment to build the system. The initial EDUs served pay for the construction of this infrastructure through their wastewater charges. New EDUs would not have made that investment. Therefore, the Authority charges a uniform Connection Fee per EDU, which can recoup some of the costs of the initial investment and/or expansion of the system. For this Study, Raftelis has also updated the Connection Fees, which are discussed in detail in Section 5. Table 4-6 shows the calculation of the projected Connection Fee revenue under the current fees.

Table 4-6: FY 2020-2024 Projected Revenues from Current Connection Fees

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Connection Fee	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
Additional EDUs per Year	500	500	500	500	500
Total Connection Fee Revenue	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000

Table 4-7 shows the projected total revenues for the Study period. In addition to the User Charge and Connection Fee revenue calculated above, the Authority also earns other revenue from services such as fats, oils, and grease (FOG) tipping fees and processing high strength waste in addition to earning interest.

Table 4-7: Status Quo Scenario FY 2020-2024 Projected Total Revenues

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
User Charge Revenues	\$13,661,700	\$13,770,994	\$13,881,162	\$13,992,211	\$14,104,149
Connection Fee Revenues	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
Interest	\$50,000	\$75,273	\$68,387	\$65,321	\$61,485
Total	\$16,777,900	\$16,909,967	\$17,013,248	\$17,121,232	\$17,229,334

4.4.1.2. Resulting Status Quo Financial Plan

Table 4-8 displays the pro forma of the Authority's combined funds (O&M/R&R Funds and Capital Fund) under current rates over the Study period without any revenue adjustment. The pro forma examines how well the projected revenues in Table 4-7 meet the O&M expenses defined in Table 4-1, debt service obligations in Table 4-2, and the CIP detailed in Table 4-3. Line 16 shows the net cash flow resulting from subtracting these expenses (Line 14) from the projected revenues under current rates (Line 6). The net cash flow for the Study period indicates that the current rates significantly underfund the Authority's financial obligations. Figure 4-3 illustrates the impact of maintaining current rates on the O&M and R&R combined funds as the Capital Fund is designated for expansion capital improvements and separately funded through Connection Fees. Note that, even when narrowing the focus to only the O&M/R&R Fund, current revenues are unable to meet these obligations.

As a result of insufficient revenues, the Authority must supplement revenues with reserve funds, shown in Table 4-8 by subtracting the net cash flow (Line 16) from the beginning cash balance (Line 20). While this solution funds expenses for FY 2020 and FY 2021, beginning in FY 2022, the Authority would be unable to fully fund its expenses. The Authority is unable to meet its combined reserve target, set by Authority policy, or its SRF loan reserve requirement (Figure 4-4) under current rates. In addition, the Authority is unable to meet its required debt coverage ratio during the entire Study period (Lines 23 and 24). The insufficiency of the current rates to meet this debt coverage obligation is also shown in Figure 4-5.

Table 4-8: Status Quo Financial Plan

Line No.	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Source of Funds					
2	User Charge Revenues	\$13,661,700	\$13,770,994	\$13,881,162	\$13,992,211	\$14,104,149
3	Connection Fee Revenues	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
4	Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
5	Interest	\$50,000	\$75,273	\$68,387	\$65,321	\$61,485
6	Total - Source of Funds	\$16,777,900	\$16,909,967	\$17,013,248	\$17,121,232	\$17,229,334
7						
8	Use of Funds					
9	Operating Expenses	\$13,106,467	\$13,877,222	\$14,354,605	\$14,839,707	\$15,341,837
10	R&R Fund CIP	\$2,028,000	\$1,898,758	\$3,709,340	\$3,586,249	\$1,502,217
11	Capital Fund CIP	\$600,000	\$337,683	\$59,537	\$107,977	\$754,980
12	Existing Debt Service	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940
13	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0
14	Total - Use of Funds	\$20,882,328	\$20,996,473	\$23,006,291	\$22,836,872	\$21,901,974
15						
16	Net Cash Flow	(\$4,104,428)	(\$4,086,506)	(\$5,993,043)	(\$5,715,640)	(\$4,672,640)
17						
18	Beginning Cash Balance	\$9,427,089	\$5,322,661	\$1,236,155	(\$4,756,888)	(\$10,472,528)
19						
20	Ending Cash Balance	\$5,322,661	\$1,236,155	(\$4,756,888)	(\$10,472,528)	(\$15,145,168)
21	Total Reserves Target	\$7,703,034	\$7,716,936	\$7,173,072	\$7,196,147	\$6,961,462
22						
23	Debt Coverage	71%	62%	54%	53%	44%
24	Target Coverage	120%	120%	120%	120%	120%

Figure 4-3: Status Quo O&M/R&R Fund Financial Plan

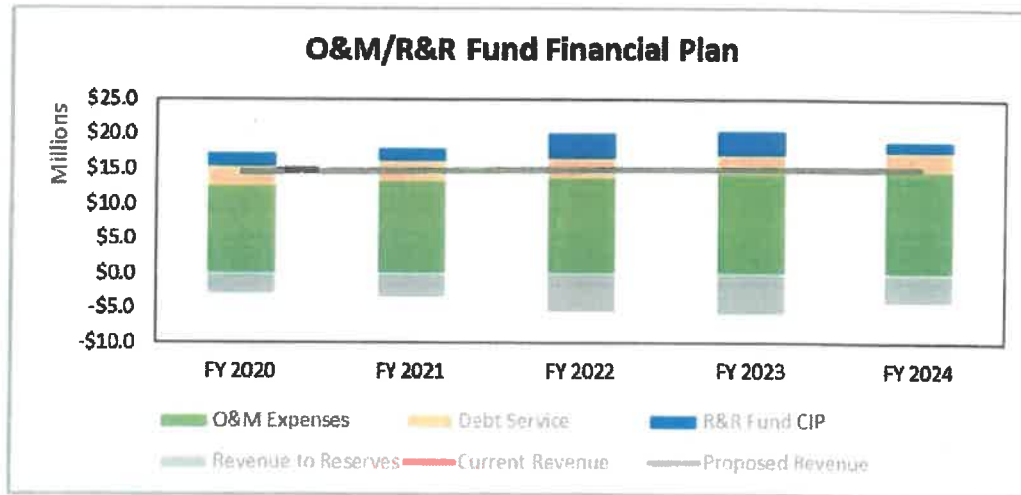


Figure 4-4: Status Quo Total Fund Balance

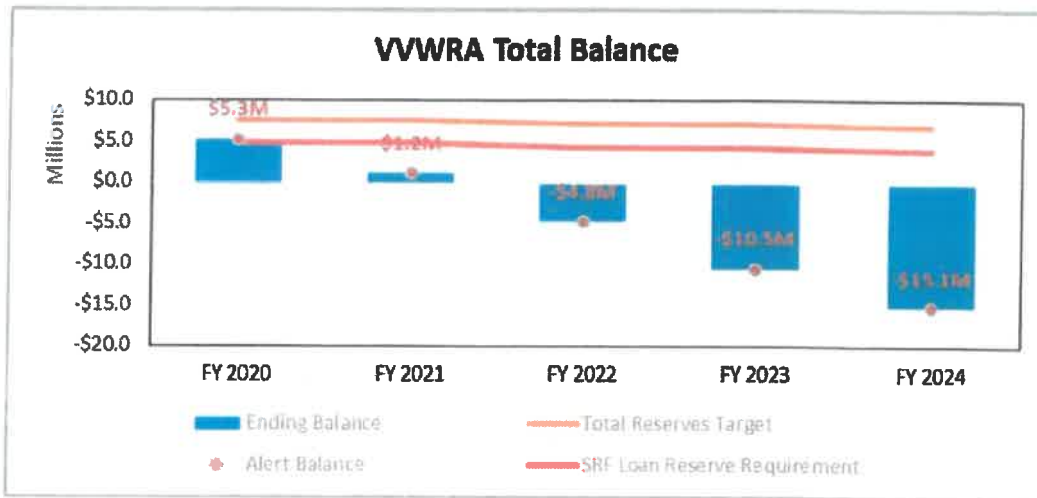
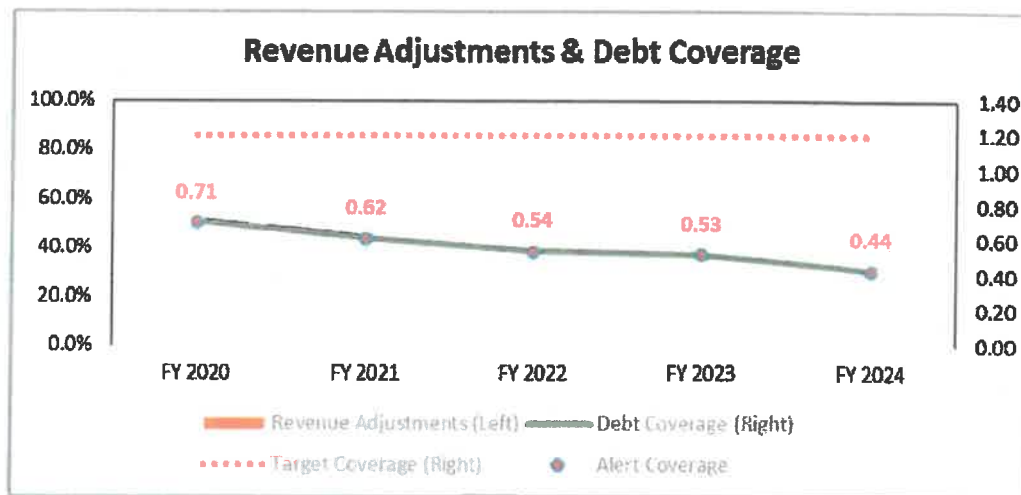


Figure 4-5: Status Quo Debt Coverage



4.4.2. SCENARIO 1 FINANCIAL PLAN (APPROVED BY BOARD)

The Scenario 1 financial plan projects the Authority’s ability to meet its expenses under the Board-approved revenue adjustment schedule, shown below in Table 4-9. This schedule will increase the current User Charge of \$3503/MG by 8-percent annually for the Study period, resulting in a cumulative increase of 46.9-percent. In this section, we calculate revenue under the resulting Scenario 1 User Charges and examine how well it meets the Authority’s revenue requirement. Note, this Board-approved scenario does not meet required debt coverage in all years within the Study period. Therefore, under our fiduciary responsibility as a municipal advisor, Raftelis cannot recommend proceeding with this scenario.

Table 4-9: Scenario 1 FY 2020-2024 Revenue Adjustment Schedule

Description	Connection Fees	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative Increase
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023	
Scenario 1 Percent Increases (Approved)	Proposed	8%	8%	8%	8%	8%	46.9%
Scenario 1 User Charges (Approved)		\$3,784	\$4,087	\$4,414	\$4,768	\$5,150	

4.4.2.1. Projected Revenues Under Scenario 1 Charges

Revenues from the Scenario 1 User Charges are calculated by first escalating the current User Charge by the schedule in Table 4-9. The resulting charge for each year is then multiplied by the projected billed wastewater flows (Line 4 of Table 3-2) to arrive at the total User Charge Revenues under the approved Scenario 1 User Charges. Note that the FY 2020 increase will not be implemented until October 2019.

Table 4-10: FY 2020-2024 Projected Revenues from Approved Scenario 1 User Charge

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Scenario 1 User Charge	\$3,503	\$3,784	\$4,087	\$4,414	\$4,768	\$5,150
Total Billed Wastewater Flows (MG)		3,900	3,931	3,963	3,994	4,026
Total Scenario 1 User Charge Revenue		\$14,481,402	\$16,062,487	\$17,486,266	\$19,036,248	\$20,723,621

Under this scenario, the Authority also expects that 500 additional units (as in the Status Quo Scenario) will be added each year between the four member agencies. Scenario 1 incorporates the proposed Connection Fees, detailed in Section 5. As noted in the previous section, Connection Fee revenues are allocated entirely to Capital Fund costs to pay for construction related to new development. The fee will continue to be a uniform fee per added EDU with only an initial increase in FY 2020 and no further adjustments over the Study period. Table 4-11 shows the projected revenues from the proposed Connection Fees. The Authority expects to incorporate the new Connection Fees in October 2019. Therefore, FY 2020 shows less total revenue from the Connection Fees as it will continue to use the current Connection Fee for the first three months of the fiscal year.

Table 4-11: FY 2020-2024 Projected Revenues from Proposed Connection Fees

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Connection Fee	\$4,000	\$4,679	\$4,679	\$4,679	\$4,679	\$4,679
Additional EDUs per Year		500	500	500	500	500
Total Connection Fee Revenue		\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500

Table 4-12 shows the projected total revenues for the Study period under Scenario 1. This combines the revenue calculated in Table 4-10 and Table 4-11 with the Other Operating Revenues and Interest originally projected in Table 4-7.

Table 4-12: Scenario 1 FY 2020-2024 Projected Total Revenues

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
User Charge Revenues	\$14,481,402	\$16,062,487	\$17,486,266	\$19,036,248	\$20,723,621
Connection Fee Revenues	\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500
Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
Interest	\$50,000	\$79,517	\$76,068	\$76,474	\$76,145
Total	\$17,852,227	\$19,545,204	\$20,965,534	\$22,515,922	\$24,202,966

4.4.2.2. Resulting Scenario 1 Financial Plan

Table 4-13 displays the pro forma of the Authority's combined funds (O&M Fund, R&R Fund, and Capital Fund) under Scenario 1 approved User Charges and Connection Fees over the Study period. The pro forma examines how well the projected revenues in Table 4-12 meet the O&M expenses defined in Table 4-1, debt service obligations in Table 4-2, and the CIP detailed in Table 4-3. Line 16 shows the net cash flow resulting from subtracting these expenses (Line 14) from the projected revenues under Scenario 1 charges (Line 6). The net cash flow improves somewhat under Scenario 1, but still significantly underfunds the Authority's financial obligations until FY 2024, where it begins to show a positive net cash flow. Figure 4-6 illustrates the impact of Scenario 1 on the O&M and R&R Funds. Under this scenario, the Authority begins to meet its debt coverage obligation in FY 2022 (also shown in Table 4-13, Line 23) due to the revenue adjustments combined with the remaining balance in the combined reserves. However, the Authority must make up the entire shortfall (Line 16) in FY 2020 and FY 2021 through reserve funding. As noted before, since the Authority is unable to meet its required debt coverage ratio under this scenario in FY 2020 and FY 2021 (Table 4-13, Line 23 and Figure 4-8), Raftelis cannot recommend that the Authority implement this scenario.

Since this scenario still results in insufficient revenues for FY 2020 through FY 2023, the Authority must supplement revenues with reserve funds, shown in Table 4-13 by subtracting the net cash flow (Line 16) from the beginning cash balance (Line 20). While this scenario avoids fully depleting reserves, it still reduces combined reserves to insufficient levels for its combined reserve target. It also does not meet the Authority's SRF loan reserve requirement (Figure 4-4) in FY 2022 and FY 2023.

Table 4-13: Scenario 1 Financial Plan

Line No.	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Source of Funds					
2	User Charge Revenues	\$14,481,402	\$16,062,487	\$17,486,266	\$19,036,248	\$20,723,621
3	Connection Fee Revenues	\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500
4	Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
5	Interest	\$50,000	\$79,517	\$76,068	\$76,474	\$76,145
6	Total - Source of Funds	\$17,852,227	\$19,545,204	\$20,965,534	\$22,515,922	\$24,202,966
7						
8	Use of Funds					
9	Operating Expenses	\$13,106,467	\$13,877,222	\$14,354,605	\$14,839,707	\$15,341,837
10	R&R Fund CIP	\$2,028,000	\$1,898,758	\$3,709,340	\$3,586,249	\$1,502,217
11	Capital Fund CIP	\$600,000	\$337,683	\$59,537	\$107,977	\$754,980
12	Existing Debt Service	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940
13	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0
14	Total - Use of Funds	\$20,882,328	\$20,996,473	\$23,006,291	\$22,836,872	\$21,901,974
15						
16	Net Cash Flow	(\$3,030,101)	(\$1,451,269)	(\$2,040,757)	(\$320,950)	\$2,300,992
17						
18	Beginning Cash Balance	\$9,427,089	\$6,396,988	\$4,945,719	\$2,904,962	\$2,584,012
19						
20	Ending Cash Balance	\$6,396,988	\$4,945,719	\$2,904,962	\$2,584,012	\$4,885,005
21	Total Reserves Target	\$7,703,034	\$7,716,936	\$7,173,072	\$7,196,147	\$6,961,462
22						
23	Debt Coverage	92%	116%	135%	178%	206%
24	Target Coverage	120%	120%	120%	120%	120%

Figure 4-6: Scenario 1 O&M/R&R Fund Financial Plan

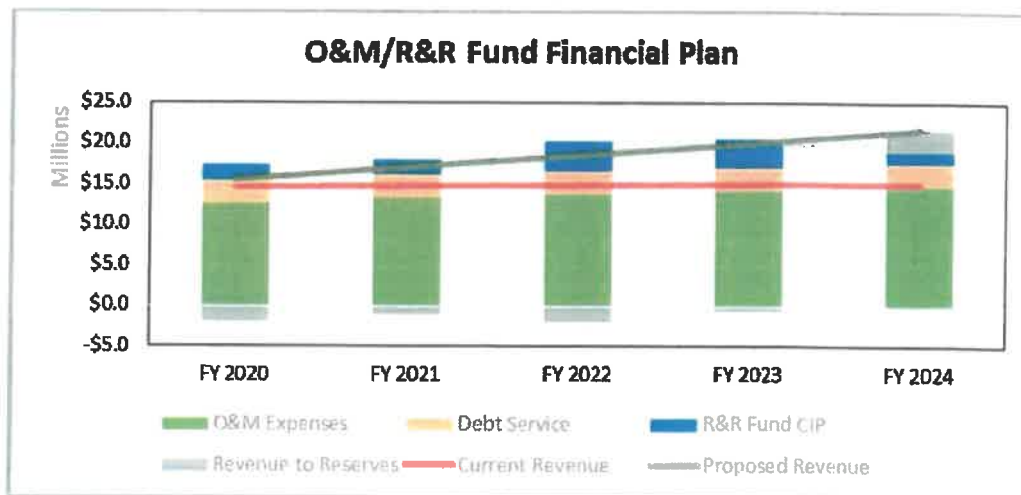


Figure 4-7: Scenario 1 Total Fund Balance

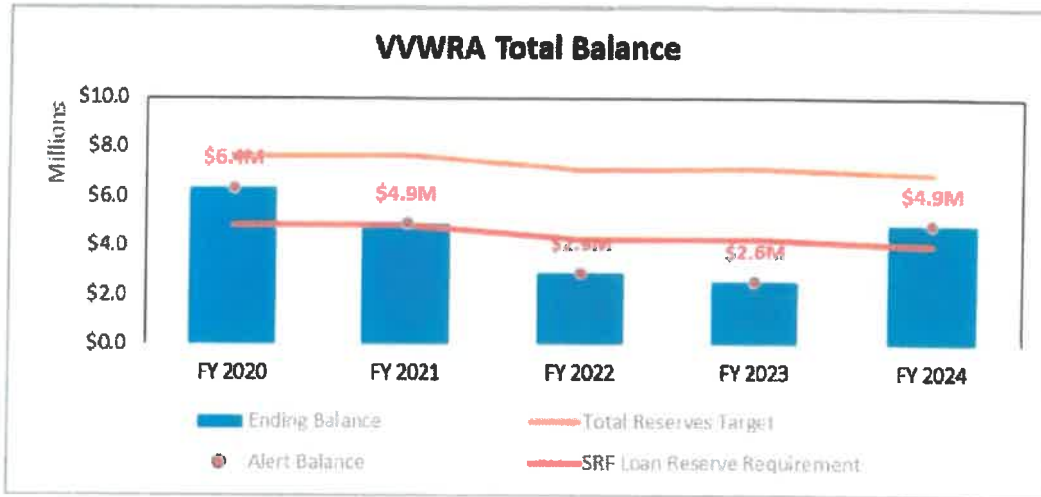
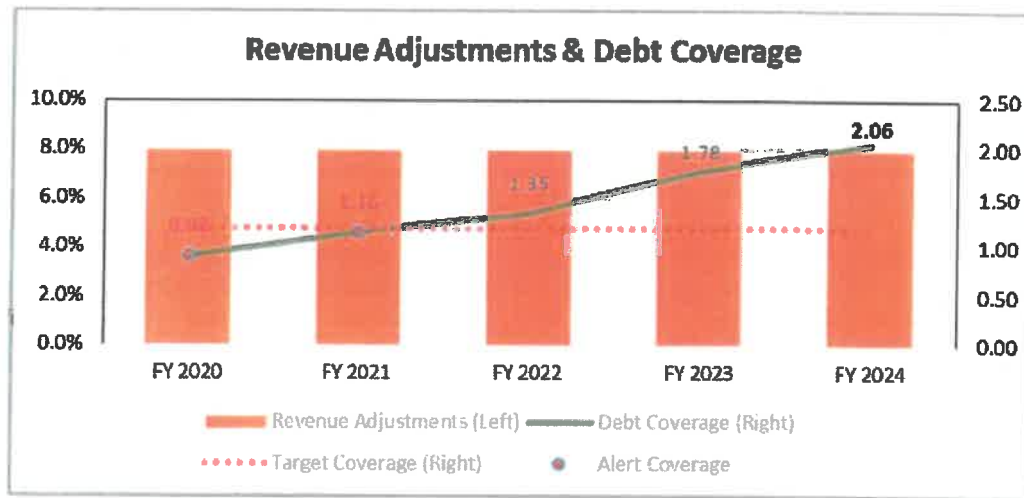


Figure 4-8: Scenario 1 Debt Coverage



4.4.3. SCENARIO 2 FINANCIAL PLAN (RAFTELIS RECOMMENDED)

Raftelis recommends the Scenario 2 Financial Plan, which projects the Authority funding its expenses while also meeting its debt coverage and reserve requirements for the entire Study period. The Scenario 2 revenue adjustments are shown below in Table 4-14. This scenario also incorporates the proposed Connection Fees effective October 2019. This schedule will increase the current User Charge of \$3,503/MG by 25-percent in October 2019 so that the Authority can begin meeting its debt coverage and reserve obligations. Raftelis then recommends an annual adjustment of 2.5-percent for the remaining years in the Study period, resulting in a cumulative increase of 38.0% for the 5-year Study period. In this section, we calculate revenue under the Scenario 2 User Charges resulting from this rate adjustment schedule and discuss how it meets the Authority’s expenses in addition to its debt coverage and SRF reserve requirements.

Table 4-14: Scenario 2 FY 2020-2024 Revenue Adjustment Schedule

Description	Connection Fees	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative Increase
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023	
Scenario 2 (Raftelis-Recommended)	Proposed	25%	2.5%	2.5%	2.5%	2.5%	38.0%
Scenario 2 User Charges		\$4,379	\$4,489	\$4,602	\$4,718	\$4,836	

4.4.3.1. Projected Revenues Under Scenario 2 Rates

As in the previous two scenarios, revenues from the Scenario 2 User Charge are calculated by first escalating the current User Charge by the schedule in Table 4-14. The resulting charge for each year is then multiplied by the projected billed wastewater flows (Line 4 of Table 3-2) to arrive at the total User Charge Revenues under the recommended Scenario 2 User Charges. Note that the FY 2020 increase will not be implemented until October 2019, thus the current rate is applied to the first three months' usage of the fiscal year.

Table 4-15: FY 2020-2024 Projected Revenues from Raftelis-Recommended Scenario 2 User Charge

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Scenario 2 User Charge	\$3,503	\$4,379	\$4,489	\$4,602	\$4,718	\$4,836
Total Billed Wastewater Flows (MG)		3,900	3,931	3,963	3,994	4,026
Total Scenario 2 User Charge Revenue		\$16,223,269	\$17,644,086	\$18,229,869	\$18,835,101	\$19,460,426

Under this scenario, the Authority also expects that 500 additional units (as in the Status Quo Scenario) will be added each year between the four member agencies. Like Scenario 1, Scenario 2 incorporates the proposed Connection Fees, detailed in Section 5. Again, Connection Fee revenues are allocated entirely to Capital Fund costs to pay for construction related to new development. The fee will continue to be a uniform fee per added EDU with only an initial increase in FY 2020 and no further adjustments over the Study period. Table 4-16 repeats the projected revenues from the proposed Connection Fees first calculated in Table 4-11. Note again that FY 2020 shows less total revenue from the Connection Fees as it will continue to use the current Connection Fee for the first three months of the fiscal year.

Table 4-16: FY 2020-2024 Projected Revenues from Proposed Connection Fees

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Connection Fee	\$4,000	\$4,679	\$4,679	\$4,679	\$4,679	\$4,679
Additional EDUs per Year		500	500	500	500	500
Total User Charge Revenue		\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500

Table 4-17 shows the projected total revenues for the Study period under Scenario 2. This combines the revenue calculated in Table 4-15 and Table 4-16 with the Other Operating Revenues originally projected in Table 4-7 and updated Interest revenue. Note that the Interest Revenue increases because the O&M/R&R Fund sees a positive

fund balance, which then gets added to the Interest earned through the CIP Fund's positive balance (note that this is the total Interest Revenue shown both in Table 4-7 and Table 4-12).

Table 4-17: Scenario 2 FY 2020-2024 Projected Total Revenues

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
User Charge Revenues	\$16,223,269	\$17,644,086	\$18,229,869	\$18,835,101	\$19,460,426
Connection Fee Revenues	\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500
Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
Interest	\$50,000	\$81,643	\$76,068	\$76,474	\$76,145
Total	\$19,594,094	\$21,128,928	\$21,709,137	\$22,314,775	\$22,939,771

4.4.3.2. Resulting Scenario 2 Financial Plan

Table 4-18 displays the pro forma of the Authority's combined funds (O&M Fund, R&R Fund, and Capital Fund) under Scenario 2 Raftelis-recommended User Charges and proposed Connection Fees over the Study period. The pro forma examines how well the projected revenues in Table 4-17 meet the O&M expenses defined in Table 4-1, debt service obligations in Table 4-2, and the CIP detailed in Table 4-3. Line 16 shows the net cash flow resulting from subtracting these expenses (Line 14) from the projected revenues under Scenario 2 charges (Line 6). The net cash flow, while only positive in FY 2021 and FY 2024 (Line 16), results in a significantly lower burden on reserves during the Study period. Note that, in order to result in a consistently positive cash flow, the Authority would have to implement higher rate adjustments than proposed in either Scenario 1 or Scenario 2. Figure 4-9 illustrates the impact of Scenario 1 on the O&M Fund and R&R Fund combined. In Scenario 2, the Authority's reserves are high enough for the entirety of the Study period to exceed the SRF Loan Reserve Requirement and meet the Authority's target reserves for all years except FY 2022 and FY 2023 (Figure 4-10). Importantly, this scenario also enables the Authority to meet its debt coverage requirements in all years of the Study period (Figure 4-11 and Table 4-18, Line 23).

Table 4-18: Scenario 2 Financial Plan

Line No.	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Source of Funds					
2	User Charge Revenues	\$16,223,269	\$17,644,086	\$18,229,869	\$18,835,101	\$19,460,426
3	Connection Fee Revenues	\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500
4	Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
5	Interest	\$50,000	\$81,643	\$76,068	\$76,474	\$76,145
6	Total - Source of Funds	\$19,594,094	\$21,128,928	\$21,709,137	\$22,314,775	\$22,939,771
7						
8	Use of Funds					
9	Operating Expenses	\$13,106,467	\$13,877,222	\$14,354,605	\$14,839,707	\$15,341,837
10	R&R Fund CIP	\$2,028,000	\$1,898,758	\$3,709,340	\$3,586,249	\$1,502,217
11	Capital Fund CIP	\$600,000	\$337,683	\$59,537	\$107,977	\$754,980
12	Existing Debt Service	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940
13	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0
14	Total - Use of Funds	\$20,882,328	\$20,996,473	\$23,006,291	\$22,836,872	\$21,901,974
15						
16	Net Cash Flow	(\$1,288,234)	\$132,455	(\$1,297,154)	(\$522,097)	\$1,037,797
17						
18	Beginning Cash Balance	\$9,427,089	\$8,138,855	\$8,271,310	\$6,974,156	\$6,452,059
19						
20	Ending Cash Balance	\$8,138,855	\$8,271,310	\$6,974,156	\$6,452,059	\$7,489,856
21	Total Reserves Target	\$7,703,034	\$7,716,936	\$7,173,072	\$7,196,147	\$6,961,462
22						
23	Debt Coverage	126%	149%	151%	174%	177%
24	Target Coverage	120%	120%	120%	120%	120%

Figure 4-9: Scenario 2 O&M/R&R Fund Financial Plan

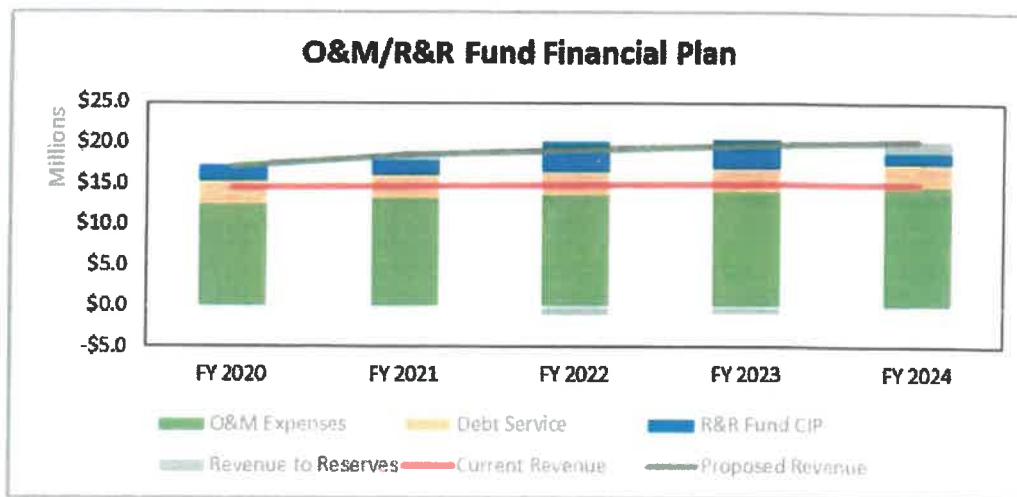


Figure 4-10: Scenario 2 Total Fund Balance

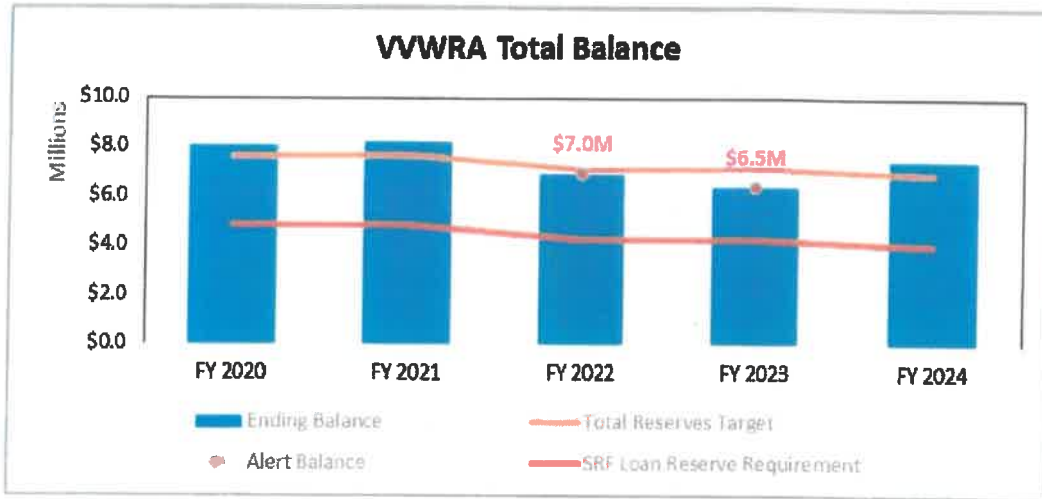
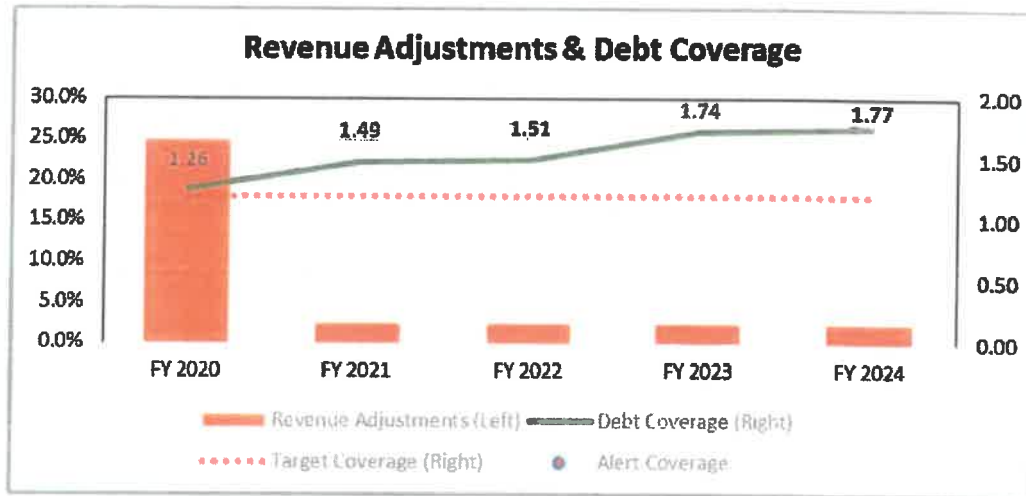


Figure 4-11: Scenario 2 Debt Coverage



4.5. Proposed User Charges

Table 4-19 shows the proposed User Charge rates under Scenario 1 and Scenario 2 over the five-year Study period. The User Charge rates shown below were previously derived in Table 4-9 for Scenario 1 and Table 4-14 for Scenario 2.

Table 4-19: Proposed User Charges (per MG)

Description	Current FY 2019	Proposed FY 2020	Proposed FY 2021	Proposed FY 2022	Proposed FY 2023	Proposed FY 2024
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023
Scenario 1 (Approved)	\$3,503	\$3,784	\$4,087	\$4,414	\$4,768	\$5,150
Scenario 2 (Raftelis Recommended)	\$3,503	\$4,379	\$4,489	\$4,602	\$4,718	\$4,836

5. Connection Fee Update

5.1. Economic and Legal Framework

For publicly owned wastewater systems, most of the assets are typically paid for by the contributions of existing customers through rates, charges, and taxes. In service areas that incorporate new customers, the infrastructure developed by previous customers is generally extended toward the service of new customers. Existing customers' investment in the existing system capacity allows newly connecting customers to take advantage of unused surplus capacity. To further economic equality among new and existing customers, in turn, new connectors will typically buy into the existing and pre-funded facilities based on the percentage of remaining available system capacity, effectively putting them on par with existing customers. In other words, the new users are buying into the existing system through a payment for the portion of facilities that has already been constructed in advance of new development. In addition, new customers will be responsible for funding new assets that will need to be built to expand the system to meet the increased demand.

5.1.1. ECONOMIC FRAMEWORK

The basic economic philosophy behind connection fees (also known as capacity fees) is that the costs of providing wastewater service should be paid for by those that receive utility from the product. In order to effect fair distribution of the value of the system, the fee should reflect a reasonable estimate of the cost of providing capacity to new users, and not unduly burden existing users. Accordingly, many utilities make this philosophy one of their primary guiding principles when developing their connection fee structure.

The philosophy that service should be paid for by those that receive utility from the product is often referred to as "growth-should-pay-for-growth." The principal is summarized in the American Water Works Association (AWWA) Manual M26, Water Rates and Related Charges:

The purpose of designing customer-contributed-[connection fees] is to prevent or reduce the inequity to existing customers that results when these customers must pay the increase in water rates that are needed to pay for added plant costs for new customers. Contributed capital reduces the need for new outside sources of capital, which ordinarily has been serviced from the revenue stream. Under a system of contributed capital, many water utilities are able to finance required facilities by use of a 'growth-pays-for-growth' policy.

5.1.2. LEGAL FRAMEWORK

The Authority reserves broad authority over the pricing of wastewater connection fees. The most salient limitation on this authority is the requirement that recovery costs on new development bear a reasonable relationship to the needs and benefits brought about by the development. Courts have long used a standard of reasonableness to evaluate the legality of connection fees. The basic statutory standards governing wastewater connection fees are embodied by Government Code Sections 66013, 66016, 66022 and 66023. Government Code Section 66013, in particular, contains requirements specific to pricing wastewater connection fees:

"Capacity charge" means a charge for public facilities in existence at the time a charge is imposed or 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, including supply or capacity contracts for rights or entitlements, real property interests, and entitlements and other rights of the local agency involving capital expense relating to its use of existing or new public facilities. A "capacity charge" does not include a commodity charge.

Section 66013 also requires that:

- » Local agencies must follow a process set forth in the law, making certain determinations regarding the purpose and use of the fee; they must establish a nexus or relationship between a development project and the public improvement being financed with the fee.

5.1.3. METHODOLOGIES

There are two primary steps in calculating connection fees: (1) determining the cost of capital related to new service connections, and (2) allocating those costs equitably to each connection. There are several available methodologies for calculating connection fees. The various approaches have evolved largely around the basis of changing public policy, legal requirements, and the unique and special circumstances of every local agency. However, there are four general approaches that are widely accepted and appropriate for wastewater connection fees. They are the “system buy-in”, “capacity buy-in”, “incremental-cost” and “hybrid” method.

5.1.3.1. System Buy-in Approach

The system buy-in approach rests on the premise that new customers are entitled to service at the same price as existing customers. However, existing customers have already developed the facilities that will serve new customers. Under this approach, new customers pay only an amount equal to the current system value, either using the original cost or replacement cost as the valuation basis and either netting the value of depreciation or not. This net investment, or value of the system, is then divided by the current demand of the system – number of customers (or equivalent units) – to determine the buy-in cost per EDU.

For example, if the existing system has 100 units of average usage and the new connector uses an equivalent unit, then the new customer would pay 1/100 of the total value of the existing system. By contributing this Connection Fee, the new connector has bought into the existing system. The user has effectively acquired a financial position on par with existing customers and will face future capital challenges on equal financial footing with those customers. This approach is suited for agencies that have capacity in their system and are essentially close to build-out. Figure 5-1 shows the framework for calculating the equity buy-in capacity fee.

Figure 5-1: Formula for Equity Buy-In Approach



5.1.3.1.1. Asset Valuation Approaches

As stated earlier, the first step is to determine the asset value of the capital improvements required to provide services to new users. However, under the system buy-in approach, the facilities have already been constructed, therefore the goal is to determine the value of the existing system/facilities. To estimate the asset value of the existing facilities required to furnish services to new users, various methods are employed. The principal methods commonly used to value a utility's existing assets are original cost and replacement cost.

1. **Original Cost (OC):** The principal advantages of the original cost method lie in its relative simplicity and stability, since the recorded costs of tangible property are held constant. The major criticism levied against original cost valuation pertains to the disregard of changes in the value of money, which are attributable to inflation and other factors. As evidenced by history, prices tend to increase rather than to remain constant. Because the value of money varies inversely with changes in price, monetary values in

most recent years have exhibited a definite decline; a fact not recognized by the original cost approach. This situation causes further problems when it is realized that most utility systems are developed over time on a piecemeal basis as demanded by service area growth. Consequently, each property addition was paid for with dollars of different purchasing power. When these outlays are added together to obtain a plant value the result can be misleading.

2. **Replacement Cost (RC):** Changes in the value of the dollar over time, at least as considered by the impacts of inflation, can be recognized by replacement cost asset valuation. The replacement cost represents the cost of duplicating the existing utility facilities (or duplicating its function) at current prices. Unlike the original cost approach, the replacement cost method recognizes price level changes that may have occurred since plant construction. The most accurate replacement cost valuation would involve a physical inventory and appraisal of plant components in terms of their replacement costs at the time of valuation. However, with original cost records available, a reasonable approximation of replacement cost plant value can most easily be ascertained by trending historical original costs. This approach employs the use of cost indices to express actual capital costs experienced by the utility in terms of current dollars. An obvious advantage of the replacement cost approach is that it gives consideration to changes in the value of money over time.

3. **Original Cost Less Depreciation (OCLD) or Replacement Cost Less Depreciation (RCLD):** Considerations of the current value of utility facilities may also be materially affected by the effects of age and depreciation. Depreciation takes into account the anticipated losses in plant value caused by wear and tear, decay, inadequacy, and obsolescence. To provide appropriate recognition of the effects of depreciation on existing utility facilities, both the original cost and replacement cost valuation measures can also be expressed on an OCLD and RCLD basis. These measures are identical to the aforementioned valuation methods, with the exception that accumulated depreciation is computed for each asset account based upon its age or condition, and deducted from the respective total original cost or replacement cost to determine the OCLD or RCLD measures of plant value.

5.1.3.2. Capacity Buy-In Approach

The capacity buy-in approach is based on the same premise as that for the system buy-in approach – that new customers are entitled to service at the same rates as existing customers. The difference between the two approaches is that for the capacity buy-in approach, for each major asset, the value is divided by its capacity. This approach presents a major challenge as determining the capacity of each major asset may be problematic or not available. The system is designed for peak use and customer behavior fluctuates based on economic and weather conditions. Figure 5-2 shows the framework for calculating a fee based on the Capacity Buy-In Approach.

Figure 5-2: Formula for Capacity Buy-In Approach

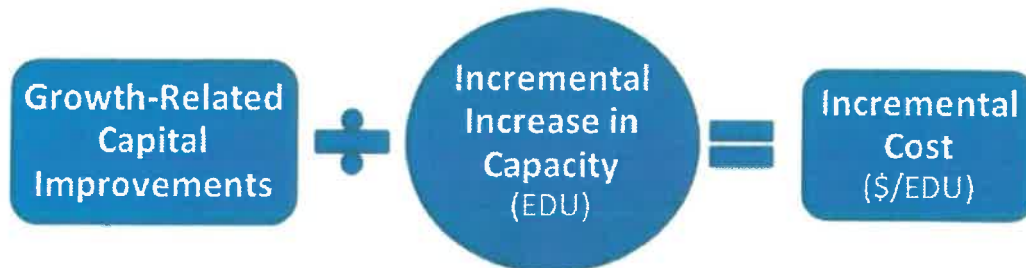


5.1.3.3. Incremental Cost Approach

The incremental method is based on the premise that new development (new users) should pay for the additional capacity and expansions necessary to serve the new development. This method is typically used where there is little or no capacity available to accommodate growth and expansion is needed to service the new development. Under the incremental method, growth-related capital improvements are allocated to new development based on their estimated usage or capacity requirements, irrespective of the value of past investments made by existing customers.

For instance, if it costs X dollars (\$X) to provide 100 additional equivalent units of capacity for average usage and a new connector uses one of those equivalent units, then the new user would pay $\$X/100$ to connect to the system. In other words, new customers pay the incremental cost of capacity. As with the buy-in approach, new connectors will effectively acquire a financial position that is on par with existing customers. Use of this method is generally considered to be most appropriate when a significant portion of the capacity required to serve new customers must be provided by the construction of new facilities. Figure 5-3 shows the framework for calculating the incremental cost capacity fee.

Figure 5-3: Formula for the Incremental Cost Approach



5.1.3.4. Hybrid Approach

The hybrid approach is typically used where some capacity is available to serve new growth but additional expansion is still necessary to accommodate new development. Under the hybrid approach the Connection Fee is based on the summation of the existing capacity and any necessary expansions.

In utilizing this methodology, it is important that system capacity costs are not double-counted when combining costs of the existing system with future costs from the Capital Improvement Program (CIP). CIP costs associated with repair and replacement of the existing system should not be included in the calculation, unless specific existing facilities which will be replaced through the CIP can be isolated and removed from the existing asset inventory and cost basis. In this case, the rehabilitative costs of the CIP essentially replace the cost of the relevant existing assets in the existing cost basis. Capital improvements that expand system capacity to serve future customers may be included in proportion to the percentage of the cost specifically required for expansion of the system. Figure 5-4 summarizes the framework for calculating the hybrid Connection Fee.

Figure 5-4: Formula for the Hybrid Approach



5.2. Current Connection Fee

The Authority has not updated its Connection Fees since 2014. Therefore, they are no longer reflective of new development's share of the facilities. The Authority utilizes a uniform per EDU Connection Fee that is based on expected demand of one single family residential customer (the equivalent dwelling unit). This translates other customer types to an equivalent number of single-family residential customers. The assumed gallons per day of wastewater flow contributed by one EDU is 200 gallons.

Table 5-1: Current Connection Fee

Description	Connection Fee
1 EDU	\$4,000

5.3. Proposed Connection Fee

The Authority's wastewater system has capacity within the existing system to serve future growth; however, there are also specific growth-related capital projects necessary accommodate new equivalent dwelling units. Therefore, we utilized the hybrid approach.

5.3.1. BUY-IN COMPONENT

The first step in determining the buy-in component of the hybrid connection fee is to determine the value of the existing system. As mentioned above, there are several methods of determining the current value of assets, but, for the purposes of this Study, Replacement Cost was used to account for today's replacement cost for system improvements. This also reflects the approach utilized in the last Connection Fee Study in 2014.

To accomplish this, the Authority provided fixed asset records on the original cost of the system. Replacement cost was then estimated by adjusting original costs to reflect what might be expected if a similar facility were constructed today. This is achieved by escalating the original construction costs by a construction cost index. Engineering News-Record's average Construction Cost Index for 20-cities (ENR CCI) is commonly used for this purpose. It reflects the average costs of a particular basket of construction goods over time. Raftelis used the list year 2018 with an index of 10,985 to inflate the replacement cost of each asset, except land, which was inflated by 2.0-percent.

Table 5-2: System Asset Valuation

Functional Category	Original Cost	Replacement Cost
Land	\$779,136	\$1,383,704
Pipelines	\$67,544,011	\$103,654,409
Buildings	\$146,214,124	\$162,095,292
Buildings and Equipment	\$56,279,649	\$124,331,898
Plant Equipment	\$15,669,080	\$19,191,513
Office Equipment	\$547,438	\$993,462
Vehicles	\$841,568	\$1,204,719
Land Improvements	\$9,738,125	\$12,300,188
Computer Software	\$228,174	\$253,773
Total	\$297,841,305	\$425,408,957

The total system replacement cost represents the estimated cost of replacing the entire system in 2018 dollars. Next, new users will pay their share of any outstanding debt through wastewater rates after joining the system. Therefore, the value of the system in Figure 5-2 should be reduced by the amount of the outstanding principal so that new users are not double-charged for this debt. Table 5-3 shows the resulting net value of the existing system in Line 3 (Line 1 – Line 2). This net value is then divided by the estimated total system capacity of 19.00 MGD, shown in Line Four. This results in the buy-in component per MGD shown in Line Five.

Table 5-3: Buy-In Component (\$/MGD) Calculation

Line No.	Description	Value
1	Total Asset Value (Replacement Cost)	\$425,408,957
2	Less Total Outstanding Debt Principal	\$91,273,216
3	Value of Existing System	\$334,135,741
4	Total System Capacity (MGD)	19.00
5	Buy-in Component (\$/MGD)	\$17,586,092

5.3.2. INCREMENTAL COMPONENT

The incremental component is intended to address the additional capacity and expansions necessary to serve the new development. Table 5-4 indicates the total debt service (principal and interest) allocated to the Capital Fund for the exclusively growth-related portion of capital projects that serve both current and projected expansion customers. In addition, this component includes the exclusively growth-related clarifier upgrades (Line 2). These result in the total capital costs allocated to growth listed in Line 3. This total cost is then divided by the incremental available system capacity of 7.66 million gallons per day (Line 4) to arrive at the Incremental Component (Line 5) of the Connection Fee.

Table 5-4: Incremental Component (\$/MGD) Calculation

Line No.	Description	Value
1	Growth-Related Debt Service	\$39,975,456
2	Additional Growth-Related CIP (Clarifier Upgrades)	\$4,500,000
3	Capital Costs Allocated to Growth	\$44,475,456
4	Incremental System Capacity (MGD)	7.66
5	Incremental Component (\$/MGD)	\$5,806,195

5.3.3. PROPOSED TOTAL CONNECTION FEE

To arrive at the total proposed connection fee, we combine the Buy-in and Incremental Components per MGD derived in Table 5-3 and Table 5-4. This is then converted from \$/MGD to \$/EDU using the assumed 200 GPD for each EDU, resulting in the Proposed Connection Fee in Line 5. The Proposed Connection Fee will remain constant with no adjustments for the entire Study period.

Table 5-5: Proposed FY 2020-2024 per EDU Connection Fee

Line No.	Description	Value
1	Buy-In Component (\$/MGD)	\$17,586,092
2	Incremental Component (\$/MGD)	\$5,806,195
3	Proposed Connection Fee (\$/MGD)	\$23,392,287
4	Assumed GPD per EDU	200
5	Proposed Connection Fee (\$/EDU)	\$4,679

Table 5-6 provides an impact analysis of the proposed Connection Fee over the current Connection fee. The updated fee results in an increase of \$679 per EDU.

Table 5-6: Proposed Connection Fee Impact

Description	Impact
Proposed Connection Fee (\$/EDU)	\$4,679
Current Connection Fee (\$/EDU)	\$4,000
Difference (\$)	\$679
Difference (%)	17.0%



VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY
Report/Recommendation to the Board of Commissioners

September 19, 2019

FROM Brian Macy, Interim General Manager

TO Board of Commissioners

SUBJECT Scheduling of the Second Reading of Ordinance 001: Adoption of Sewer User Charge

RECOMMENDATION

It is recommended that the Board of Commissioners authorize the Interim General Manager to schedule the second reading of Ordinance 001: Adoption of Sewer User Charge for October 17, 2019 at 8:30 AM.

REVIEW BY OTHERS

This recommendation was reviewed by Piero Dallarda, Legal Counsel

BACKGROUND INFORMATION

On direction from the Board, the first reading of Ordinance 001 was scheduled for September 19, 2019. Two public hearings are required to revise an ordinance. Because the Board needs to take action and direct staff to do so, staff is requesting such direction.

FINANCIAL IMPACT

RELATED IMPACTS



**VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY
Report/Recommendation to the Board of Commissioners**

September 19, 2019

FROM Brian Macy, Interim General Manager
TO Board of Commissioners
SUBJECT First Reading and Eventual Adoption of Ordinance 002 Amendment

RECOMMENDATION

Staff recommends that the Board of Commissioners conduct the public hearing and first reading of Ordinance 002 Amendment. This is the first step in the process for final approval and adoption of the new connection fee schedule based on the report provided by the rate consultant Raftaelis. The second reading and adoption is currently scheduled for October 16, 2019.

REVIEW BY OTHERS

This recommendation was reviewed by Piero Dallarda, Legal Counsel

BACKGROUND INFORMATION

On July 18, 2019, the Board adopted Resolution 2019-10 and the Fiscal Year 2019-2020 Budget which included an 17% increase in connection fees. This amendment to Ordinance 002 is consistent with Board direction and Resolution 2019-10. As discussed in the Raftelis study, the existing infrastructure deficiencies and future needs of VWVRA have been identified and reviewed extensively. We have attached to the staff recommendation the proposed connection-capacity fees as set forth in the Wastewater Rate Study.

Following the required publication, the public hearing and first reading of Ordinance 002 will be taking place. At the public hearing, the Board may receive comments both in favor and against the adoption of the ordinance and new connection fee schedule. If it deems it necessary, the Board may request additional information in preparation for the final reading and recommended adoption of the Ordinance on October 16, 2019. As discussed in the documents attached, the existing infrastructure deficiencies and future needs of VWVRA have been identified and reviewed by a committee of the Member Agencies and at numerous Board workshops. The proposed rate structure would go in to effect on December 1, 2019.

FINANCIAL IMPACT

The financial impact will vary by Member Agency; the proposed rate schedule is attached.

RELATED IMPACTS

The proposed infrastructure discussed during the workshops and Board Meetings, and listed in the Capital Improvement Plan contained within the Fiscal Year 2019-2020 and Wastewater Rate Study will allow VVWRA to reliably meet the state mandates for wastewater treatment, interceptor capacity, nutrient removal, and reclaimed water delivery.

**AMENDMENT TO
ORDINANCE NO. 002**

WHEREAS, Ordinance No. 002, adopted May 26, 1983 by the Board of Commissioners (Commission) of the Victor Valley Wastewater Reclamation Authority (VWVRA), as amended from time to time, establishes and imposes a schedule of fees for the connection of real property to the VWVRA sewerage system, and

WHEREAS, the Commission believes that it is necessary and desirable to update and clarify the terms and conditions applicable to the calculation of connection fees for the benefit of the member entities and the users within the boundaries of VWVRA; and

WHEREAS, the funds collected pursuant to the Connection Fee Schedule attached as Table 1 of Ordinance No. 002 are used to pay for capital improvements to the VWVRA sewerage system that are designed and constructed for the purpose of increasing the capacity of the VWVRA sewerage system to meet growth, and;

WHEREAS, a study was conducted on behalf of VWVRA by Raftelis in August, 2019, and was received, filed and approved by the Commission on September 19, 2019 (the "Study"); and

WHEREAS, the Study, a copy of which is attached hereto as Exhibit "A" and incorporated herein by this reference, has determined that an increase is necessary in the amount of the connection fees collected by VWVRA to ensure the ongoing ability of VWVRA to increase the capacity of the VWVRA sewerage system to meet growth; and

WHEREAS, the Board of Commissioners conducted a Public Hearing and a First Reading of the Ordinance at the regular meeting held on September 19, 2019.

NOW THEREFORE BE IT RESOLVED that the Board of Commissioners of the Victor Valley Wastewater Reclamation Authority does hereby ordain as follows:

Section 1. Findings. The Board of Commissioners asserts and adopts the findings set forth above;

Section 2. Amendment of Table I of Ordinance No. 002 Table I, as referenced in Sections 3.01, 3.05, and 3.08 of Ordinance No. 002, is hereby amended and revised and is incorporated hereto as Exhibit "B".

Section 3. Amendment of Table IV of Ordinance No. 002 Table IV, as referenced in Section 3.08 of Ordinance No. 002, is hereby amended and revised and is hereto as Exhibit "C".

Section 4. Continued Effect of Remaining Provisions of Ordinance No. 002. The remaining provisions of Ordinance No. 002 not expressly repealed or amended by this Ordinance shall remain in full force and effect.

Section 5. Effective Date. This Ordinance shall take effect and be in full force thirty (30) days after its adoption. Prior to the expiration of the fifteen (15) days from its adoption, the Ordinance or a summary of it shall be published in The Daily Press, a newspaper of general circulation within the boundaries of the Victor Valley Wastewater Reclamation Authority, or a newspaper of substantially equivalent circulation.

APPROVED AND ADOPTED this 17th day of October 2019.

Scott Nassif
Chair, VVWRA Board of Commissioners

APPROVED AS TO FORM

ATTEST:

Piero C. Dallarda of
Best Best & Krieger LLP
VVWRA General Counsel

Larry Bird
Secretary, VVWRA Board of Commissioners

CERTIFICATION

I, Kristi Casteel, Secretary to the Board of Commissioners (“Commission”) of the Victor Valley Wastewater Reclamation Authority, certify that the foregoing Ordinance was introduced at a regular meeting of the Board of Commissioners on the September 19, 2019, and was adopted by the Commission at a regular meeting held on the October 17, 2019 by the following vote of the Commissioners:

AYES:

NOES:

ABSTAINED:

ABSENT:

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Victor Valley Wastewater Reclamation Authority on this October 17, 2019.

Kristi Casteel
Secretary to the Board of Commissioners

EXHIBIT A

VICTOR VALLEY

WASTEWATER RECLAMATION AUTHORITY

2019 Wastewater Rate Study and Connection Fee Update

Final Report / August 19, 2019





August 19, 2019

Chieko Keagy
 Controller
 Victor Valley Wastewater Reclamation Authority
 20111 Shay Road
 Victorville, CA 92394

Subject: 2019 Wastewater Rate Study and Connection Fee Update Report

Dear Ms. Keagy,

Raftelis is pleased to provide this 2019 Wastewater Rate Study and Connection Fee Update Report for the Victor Valley Wastewater Reclamation Authority (Authority). The contents of this Report include a financial plan for the Authority for fiscal year (FY) 2020 to FY 2024, proposed user charges over the same timeframe, as well as updated connection fees.

The major objectives of the study include the following:

- » Develop a five-year financial plan through FY 2024 to ensure financial sufficiency, meet operating costs, ensure sufficient funding to meet debt obligations, and fund necessary capital expenditures
- » Propose updated user charge rates for FY 2020 to FY 2024
- » Update the prior connection fee calculation methodology and develop proposed connection fees that are justifiable and fair to both new and existing users of the Authority's wastewater system.

This Report summarizes the key findings and recommendations related to the development of the financial plan, the associated user charges, and the updated connection fee. It has been a pleasure working with you and we thank you, Xiwei Wang, and other Authority staff for the support provided during this study.

Sincerely,

RAFTELIS FINANCIAL CONSULTANTS, INC.


Sanjay Gaur
 Vice President


Charles Diamond
 Consultant

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1. Executive Summary

1.1. Background of the Study

The Victor Valley Wastewater Reclamation Authority (Authority) is a Joint Power public agency of the State of California formed in 1977 to maintain compliance with the Federal Clean Water Act and to provide wastewater treatment within a 279 square mile service area in San Bernardino County. The primary function of the Authority is to receive and treat wastewater from the four member agencies listed below:

- » Town of Apple Valley
- » City of Hesperia
- » City of Victorville
- » County of San Bernardino Special District Service Areas No. 42 (Oro Grande) and No. 64 (Spring Valley Lake)

The Authority is governed by a Board of Commissioners that consists of four elected officials representing each member agency listed above. The Authority operates a Regional Wastewater Treatment Plant with 17 million gallons per day (MGD) of treatment capacity in the City of Victorville. Additionally, the Authority completed construction in April 2018 of two Sub-regional Wastewater Reclamation Plants with 1 MGD of treatment capacity each in the Town of Apple Valley and the City of Hesperia. Wastewater treated by the Authority is either discharged to the Mojave River or utilized as recycled water for irrigative use after undergoing an extensive cleaning and purification process.

The Authority engaged Raftelis in 2018 to conduct a wastewater rate study and connection fee update (Study). The purpose of the Study is to update the Authority's financial plan, user charges, and connection fees. User charges assessed per million gallons (MG) of billed wastewater flows and one-time connection fees assessed per equivalent dwelling unit (EDU) of new development constitute the vast majority of the Authority's annual revenues. Therefore, both user charges and connection fees must be appropriately set to ensure the financial sufficiency of the Authority in manner that is equitable across member agencies.

The Authority last conducted a Financial Plan Update Study and Connection Fee Study in 2014. These prior studies established proposed user charges and connection fees through fiscal year (FY) 2018.¹ Since these prior studies were completed in 2014, unanticipated circumstances have significantly impacted the Authority's financial situation. Firstly, the service area has experienced slower growth from new development than what was anticipated in the 2014 studies. Consequently, lower revenues from user charges and connection fees have been collected compared to projections from the prior financial plan. Additionally, a flow diversion by the City of Victorville and non-payment of connection fees by the City of Hesperia have critically impacted the Authority's financial situation in an adverse manner.

This Study was conducted in order to develop an updated financial plan that accounts for the aforementioned financial challenges which have emerged since the prior studies were conducted in 2014, and to develop updated user charges and connection fees that enhance the financial stability of the Authority. All analyses, results, and recommendations related to this Study are outlined in this Wastewater Rate Study and Connection Fee Update Report (Report).

¹ The Authority's fiscal year spans from July 1 of the prior calendar year to June 30 of the concurrent calendar year. For example, FY 2018 spanned from July 1, 2017 to June 30, 2018.

Given these considerations, the major objectives of this Study include the following:

1. Develop an updated five-year financial plan through FY 2024 to ensure financial sufficiency, meet operating costs, ensure sufficient funding to meet debt obligations, and fund necessary capital expenditures;
2. Develop proposed user charges rates for FY 2020 to FY 2024; and
3. Update the prior connection fee calculation methodology and develop proposed connection fees that are justifiable and fair to both new and existing users of the Authority's wastewater system.

1.2. Results and Recommendations

1.2.1. FINANCIAL PLAN

For this Study, Raftelis and the Authority examined three different financial planning scenarios. The Status Quo Scenario provided the Authority an understanding of the adequacy of current User Charges and Connection Fees in funding the Authority's expenses and debt obligations. Scenario 1, which is not recommended by Raftelis but approved by the Authority's Board of Commissioners, is an alternative revenue adjustment schedule that neither meets the Authority's revenue requirements nor its debt coverage requirements. Note that it incorporates the proposed Connection Fees discussed in Section 5. Scenario 2 presents Raftelis' recommended financial plan and required revenue adjustments in order to adequately meet the Authority's O&M, capital, and debt service expenses as well as meeting its required debt coverage ratio. As with Scenario 1, Scenario 2 incorporates the proposed Connection Fees rather than the current fees. Table 1-1 summarizes the different scenarios examined for this study.

Table 1-1: FY 2020-2024 Scenario Revenue Adjustment Comparison

Description	Connection Fees	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative Increase
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023	
Status Quo	Current	0%	0%	0%	0%	0%	0%
Scenario 1 (Approved)	Proposed	8%	8%	8%	8%	8%	46.9%
Scenario 2 (Raftelis Recommended)	Proposed	25%	2.5%	2.5%	2.5%	2.5%	38.0%

Figure 1-1: Scenario 1 O&M/R&R Fund Financial Plan Figure 1-1 illustrates Scenario 1's inability to meet the Authority's O&M and R&R capital expenses and the significant reliance on reserves to meet the Authority's costs for most of the Study Period. As a result of this depletion of reserves, the Authority is unable to meet its combined reserve targets as well as unable to meet its SRF Loan Reserve Requirement (Figure 1-2). As mentioned above, Scenario 1 also results in the Authority not meeting its debt coverage requirements in FY 2020 and FY 2021, as illustrated in Figure 1-3. It is for these reasons that Raftelis cannot recommend this scenario.

Figure 1-1: Scenario 1 O&M/R&R Fund Financial Plan

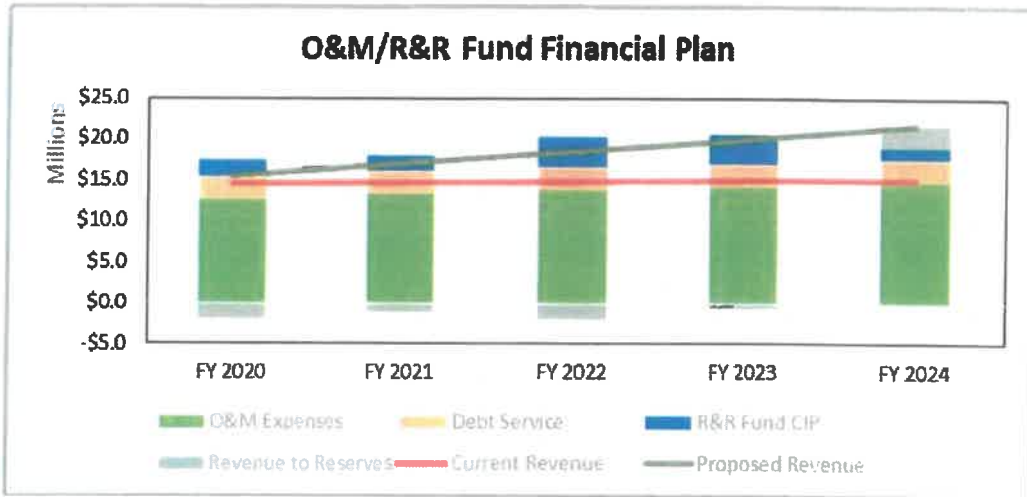


Figure 1-2: Scenario 1 Total Fund Balance

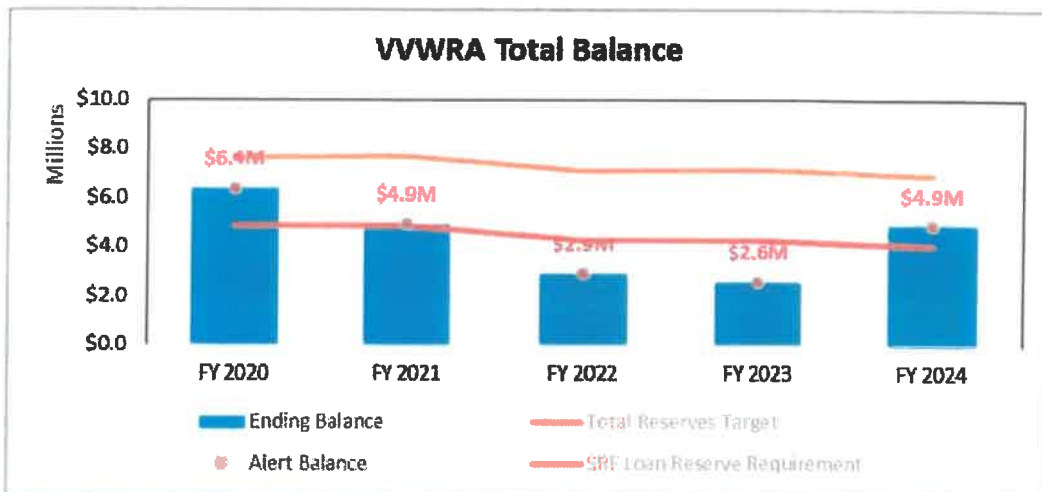
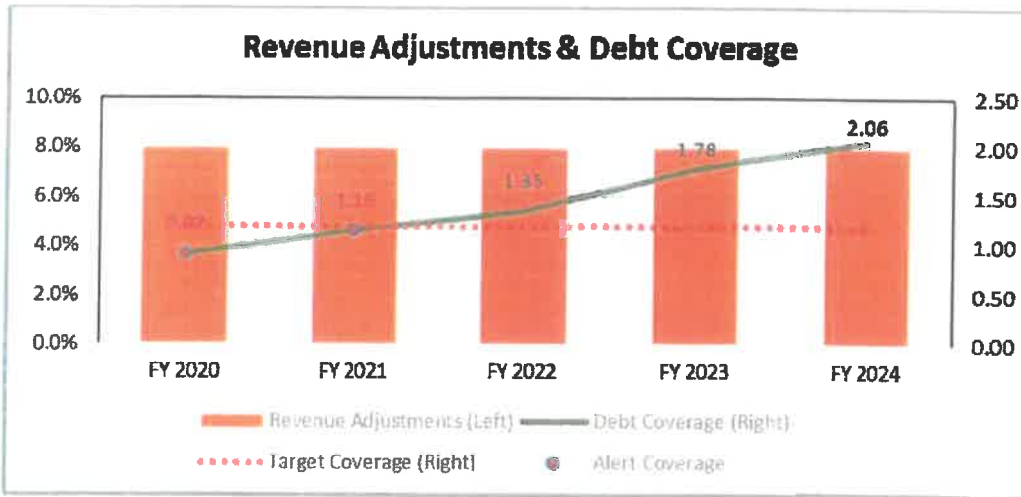


Figure 1-3: Scenario 1 Debt Coverage



In contrast, while Scenario 2 requires some reliance on reserves, it does meet the SRF Reserve Requirement and the debt coverage requirement for the entire Study period. In order to fully fund expenses through rate revenue and not rely on reserves at all, the Authority would have to utilize greater revenue adjustments than proposed in Scenario 2. Figure 1-4, Figure 1-5, and Figure 1-6 show how the Authority meets its obligations while sufficiently funding its expenses.

Figure 1-4: Scenario 2 O&M/R&R Fund Financial Plan

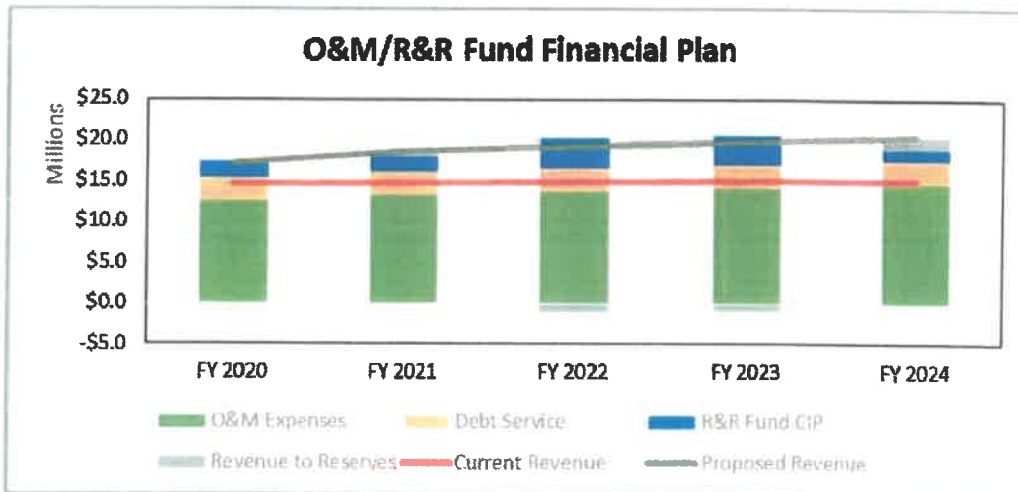


Figure 1-5: Scenario 2 Total Fund Balance

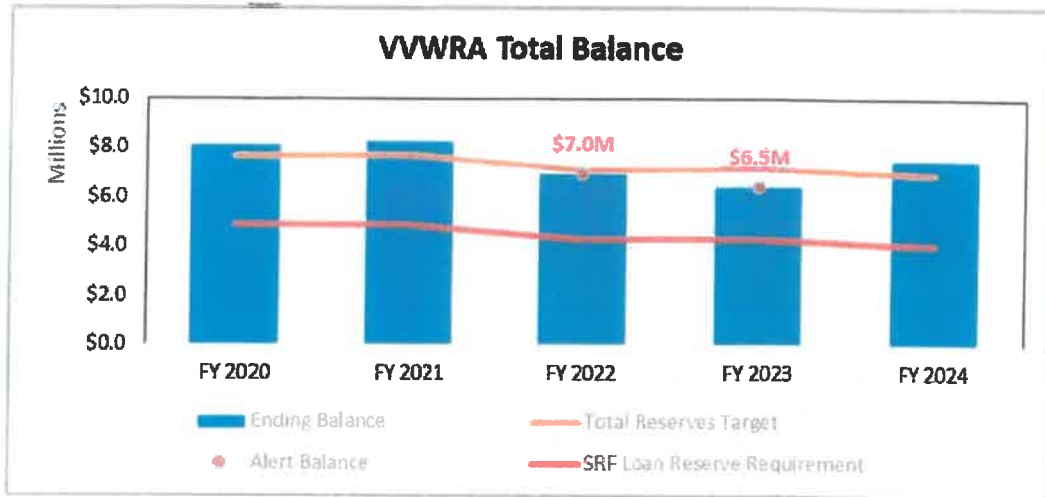
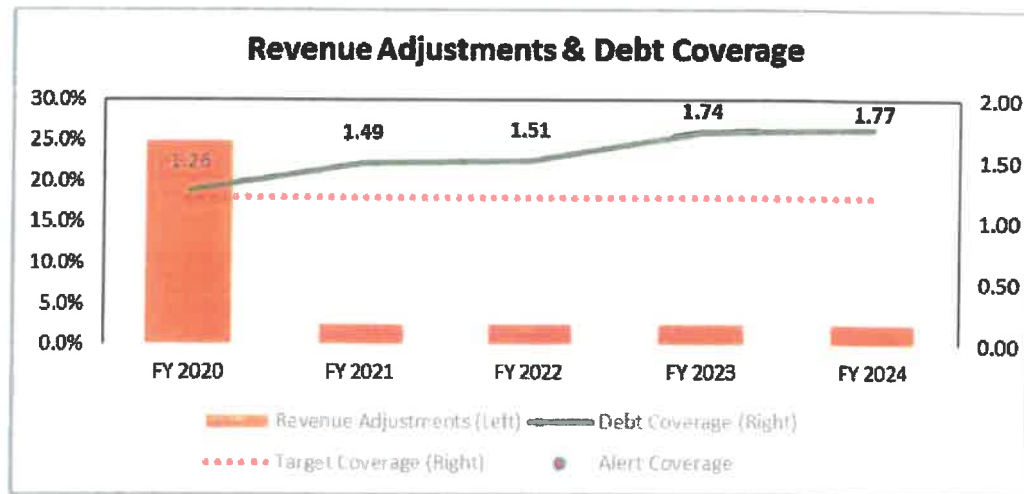


Figure 1-6: Scenario 2 Debt Coverage



1.2.2. PROPOSED USER CHARGES

Proposed User Charges are calculated by simply increasing the prior year's rates by the proposed revenue adjustments from Table 1-1. Error! Reference source not found. shows proposed user charges in each year throughout the Study Period for Scenario 1 and Scenario 2.

Table 1-2: Proposed User Charges (per MG)

Description	Current FY 2019	Proposed FY 2020	Proposed FY 2021	Proposed FY 2022	Proposed FY 2023	Proposed FY 2024
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023
Scenario 1 (Approved)	\$3,503	\$3,784	\$4,087	\$4,414	\$4,768	\$5,150
Scenario 2 (Raftelis Recommended)	\$3,503	\$4,379	\$4,489	\$4,602	\$4,718	\$4,836

1.2.3. UPDATED CONNECTION FEES

The Authority has not updated its Connection Fees since 2014. Therefore, they are no longer reflective of new development's share of the facilities. The Authority utilizes a uniform per EDU Connection Fee that is based on expected demand of one single family residential customer (the equivalent dwelling unit). This translates other customer types to an equivalent number of single-family residential customers. The assumed gallons per day of wastewater flow contributed by one EDU is 200 gallons.

Table 1-3: Current Connection Fee

Description	Connection Fee
1 EDU	\$4,000

The Authority's wastewater system has capacity within the existing system to serve future growth; however, there are also specific growth-related capital projects necessary accommodate new equivalent dwelling units. Therefore, we utilized the hybrid approach. Section 5 provides the detailed calculation of the buy-in and incremental components combined to arrive at the proposed Connection Fee. Table 1-4 shows the resulting proposed Connection Fee per equivalent dwelling unit (EDU) in comparison to the current Connection Fee.

Table 1-4: Proposed Connection Fee Impact

Description	Impact
Proposed Connection Fee (\$/EDU)	\$4,679
Current Connection Fee (\$/EDU)	\$4,000
Difference (\$)	\$679
Difference (%)	17.0%

2. Introduction

2.1. Background of the Study

The Victor Valley Wastewater Reclamation Authority (the Authority) is a Joint Power public agency of the State of California formed in 1977 to maintain compliance with the Federal Clean Water Act and to provide wastewater treatment within a 279 square mile service area in San Bernardino County. The primary function of the Authority is to receive and treat wastewater from the four member agencies listed below:

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The Authority engaged Raftelis in 2018 to conduct a wastewater rate study and connection fee update (Study). The purpose of the Study is to update the Authority's financial plan, user charges, and connection fees. User charges assessed per million gallons (MG) of billed wastewater flows and one-time connection fees assessed per equivalent dwelling unit (EDU) of new development constitute the vast majority of the Authority's annual revenues. Therefore, both user charges and connection fees must be appropriately set to ensure the financial sufficiency of the Authority in manner that is equitable across member agencies.

The Authority last conducted a Financial Plan Update Study and Connection Fee Study in 2014. These prior studies established proposed user charges and connection fees through fiscal year (FY) 2018.² Since these prior studies were completed in 2014, unanticipated circumstances have significantly impacted the Authority's financial situation. Firstly, the service area has experienced slower growth from new development than what was anticipated in the 2014 studies. Consequently, lower revenues from user charges and connection fees have been collected compared to projections from the prior financial plan. Additionally, a flow diversion by the City of Victorville and non-payment of connection fees by the City of Hesperia have critically impacted the Authority's financial situation in an adverse manner.

This Study was conducted in order to develop an updated financial plan that accounts for the aforementioned financial challenges which have emerged since the prior studies were conducted in 2014, and to develop updated user charges and connection fees that enhance the financial stability of the Authority. All analyses, results, and recommendations related to this Study are outlined in this Wastewater Rate Study and Connection Fee Update Report (Report).

² The Authority's fiscal year spans from July 1 of the prior calendar year to June 30 of the concurrent calendar year. For example, FY 2018 spanned from July 1, 2017 to June 30, 2018.

Given these considerations, the major objectives of this Study include the following:

4. Develop an updated five-year financial plan through FY 2024 to ensure financial sufficiency, meet operating costs, ensure sufficient funding to meet debt obligations, and fund necessary capital expenditures;
5. Develop proposed user charges rates for FY 2020 to FY 2024; and
6. Update the prior connection fee calculation methodology and develop proposed connection fees that are justifiable and fair to both new and existing users of the Authority's wastewater system.

3. Key Assumptions

The Study period is from FY 2020 to 2024. The Study is based on the FY 2020 budget inflated annually to forecast changes in costs. Various types of assumptions and inputs were incorporated into the Study based on directions from Authority staff. The cost escalation factors are shown in Table 3-1. The general inflation rate of 3% is based on a historical Consumer Price Index (CPI) range of 3-3.5%. All other inflationary assumptions were determined based on Authority staff estimates.

Table 3-1: Cost Escalation Factors

Inflationary Category	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
General	3.0%	3.0%	3.0%	3.0%	3.0%
Salaries	3.0%	3.0%	3.0%	3.0%	3.0%
Benefits	5.0%	5.0%	5.0%	5.0%	5.0%
Utilities	3.0%	3.0%	3.0%	3.0%	3.0%
Capital	3.1%	3.1%	3.1%	3.1%	3.1%
Non-Inflated	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Recurring	-100.0%	-100.0%	-100.0%	-100.0%	-100.0%
Combined Salary/Benefits	3.0%	3.0%	3.0%	3.0%	3.0%

The Authority does not expect to serve any additional agencies over its current customer base during the Study period. However, across its member agencies, they expect the addition of 500 equivalent dwelling units (EDUs) per fiscal year. This incremental increase (Table 3-2, Line 1) will both provide the Authority with additional connection fee revenues and slightly increase wastewater flows annually during the Study period (Line 2). The Authority does not expect water conservation to affect wastewater flows during the Study period (Line 3). The resulting projected flows in million gallons (MG) are shown in Line 4.

Table 3-2: System Demand Assumptions

Line	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Incremental Increase in EDUs	500	500	500	500	500
2	Annual Growth in Billed Wastewater Flows	0.59%	0.80%	0.80%	0.80%	0.80%
3	Water Conservation Factor	100%	100%	100%	100%	100%
4	Total Billed Wastewater Flows (MG)	3,900	3,931	3,963	3,994	4,026

4. Financial Plan Development

4.1. Operating & Maintenance Expenses

The Authority's combined Operating and Maintenance (O&M) expenses are shown in Table 4-1. The FY 2020 budget is inflated according to the inflationary factors shown in Section 3. Personnel Expenses include salaries, CALPERS benefits, and insurance. Maintenance Expenses includes costs such as vehicle repairs, maintaining safety equipment, and grounds maintenance. Operations Expenses encompass costs such as utility bills, wastewater treatment costs, and lab supplies. Administrative Expenses include office supplies, legal services, and permits & professional fees. Note that Construction Expenses consist of other interest expenses and are not capital improvements themselves.

Table 4-1: Budgeted and Projected Water O&M Expenses

Description	FY 2020 Budgeted	FY 2021 Projected	FY 2022 Projected	FY 2023 Projected	FY 2024 Projected
Personnel Expenses	\$4,974,695	\$5,481,876	\$5,687,015	\$5,890,914	\$6,102,583
Maintenance Expenses	\$2,864,482	\$2,950,416	\$3,038,929	\$3,130,097	\$3,224,000
Operations Expenses	\$3,433,685	\$3,556,645	\$3,684,056	\$3,816,082	\$3,952,891
Administration Expenses	\$1,822,648	\$1,877,327	\$1,933,647	\$1,991,657	\$2,051,406
Construction Expenses	\$10,957	\$10,957	\$10,957	\$10,957	\$10,957
Total	\$13,106,467	\$13,877,222	\$14,354,605	\$14,839,707	\$15,341,837

4.2. Debt Service Obligations

Table 4-2 lists the Authority's annual debt service for the Study period. The debt obligation for both the 9.5 MGD Capital Improvements and 11 MGD Expansion of the treatment plant will be fulfilled during the Study period (FY 2020 and FY 2022 respectively). Additionally, the Authority does not intend to incur any new debt during the Study period.

Table 4-2: Annual Debt Service

Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Current Debt					
9.5 MGD Capital Improvements	\$265,049	\$0	\$0	\$0	\$0
11 MGD Expansion	\$579,870	\$579,870	\$579,870	\$0	\$0
North Apple Valley Interceptor	\$258,151	\$258,151	\$258,151	\$258,151	\$258,151
Phase IIIA Regulatory Upgrades	\$1,027,610	\$1,027,610	\$1,027,610	\$1,027,610	\$1,027,610
Upper Narrows Replacement	\$257,745	\$257,745	\$257,745	\$257,745	\$257,745
Nanticoke Bypass	\$271,633	\$271,633	\$271,633	\$271,633	\$271,633
Apple Valley Sub-Regional	\$1,024,951	\$1,024,951	\$1,024,951	\$1,024,951	\$1,024,951
Hesperia Subregional	\$1,462,850	\$1,462,850	\$1,462,850	\$1,462,850	\$1,462,850
Total Current Debt	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940
Proposed Debt	\$0	\$0	\$0	\$0	\$0
Total Debt Service	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940

4.3. Capital Improvement Plan

Table 4-3 lists the Authority's capital improvement plan (CIP) for the Study period. The Authority intends to fully fund its CIP for the Study period through User Charge and Connection Fee Revenues. User Charge revenues (O&M/R&R Fund) will fund capital repair and replacement projects, while the Connection Fee revenues (Capital Fund) will fund new capital projects.

Table 4-3: FY 2020-2024 Capital Improvement Plan

Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Digester 4&5 Dome Repair and Misc. Mechanical	\$325,000	\$386,660	\$0	\$0	\$0
Digester 4&5 Dome Repair and Misc. Mechanical	\$50,000	\$0	\$0	\$0	\$0
SCADA Upgrade Project (Ignition)	\$0	\$143,322	\$0	\$0	\$0
Coating Project: UV and DAFTS	\$425,000	\$0	\$0	\$0	\$0
Digital Information Management System (DIMS)	\$0	\$61,866	\$0	\$0	\$0
Headworks Replacement	\$50,000	\$154,664	\$212,631	\$3,288,628	\$0
Oro Grande Interceptor First Priority - possible USDA grant	\$150,000	\$103,109	\$2,498,409	\$0	\$0
Ossum Wash	\$0	\$670,210	\$0	\$0	\$0
R4B South Lower Narrows	\$0	\$0	\$0	\$0	\$0
Interceptor Risk Assessment Report	\$50,000	\$0	\$0	\$0	\$0
Programmable Logic Control (PLC) Replacement	\$400,000	\$0	\$0	\$0	\$0
Programmable Logic Control (PLC) Replacement	\$55,000	\$0	\$0	\$0	\$0
Fleet Replacement	\$100,000	\$0	\$0	\$0	\$0
Network Re-design and updates	\$100,000	\$51,555	\$0	\$0	\$0
Network Re-design and updates	\$35,000	\$0	\$0	\$0	\$0
Main Switch Board Upgrade/Replacement	\$0	\$0	\$372,103	\$0	\$0
Motor Control Center (MCC) - Aqua Diamonds	\$0	\$170,130	\$0	\$0	\$0
UV Generator Tie-in to South Perc. Pond PS	\$0	\$0	\$398,682	\$0	\$0
Micro-grid/Battery Storage Project	\$0	\$0	\$0	\$0	\$0
Storm Water Spill Containment System	\$400,000	\$0	\$0	\$0	\$0
Digester 1-5 Engineering Services	\$50,000	\$20,622	\$0	\$0	\$0
Golf Cart Recharging Station	\$0	\$15,466	\$0	\$0	\$0
Operations Building Extension	\$0	\$206,219	\$0	\$0	\$0
Digesters 4 and 5 Supernatant Line	\$0	\$77,332	\$0	\$0	\$0
Upgrades to AV WRP	\$100,000	\$0	\$0	\$0	\$0
R4A North Lower Narrows MH 3-1 to MH 3-3	\$0	\$51,555	\$106,315	\$54,810	\$1,895,502
R7 Old Town VV MH 4-24 to MH 4-25A	\$0	\$0	\$0	\$109,621	\$113,029
R5 Cemex MH 4-7 to 4-14	\$0	\$0	\$53,158	\$109,621	\$113,029
R4B South Lower Narrows	\$0	\$0	\$0	\$0	\$0
Solids Dewatering and Side Stream Study	\$50,000	\$0	\$0	\$0	\$0
Capitalized Pump Expenses	\$288,000	\$123,731	\$127,578	\$131,545	\$135,635
Total	\$2,628,000	\$2,236,441	\$3,768,876	\$3,694,225	\$2,257,196

Figure 4-1 and Figure 4-2 show total CIP by funding source for the Authority's R&R Fund and Capital Fund respectively. R&R Fund CIP includes projects required to maintain the existing wastewater system, while Capital Fund CIP includes CIP projects required to serve future new connections to the wastewater system.

Figure 4-1: FY 2020-2024 O&M/R&R Fund Capital Financing Plan

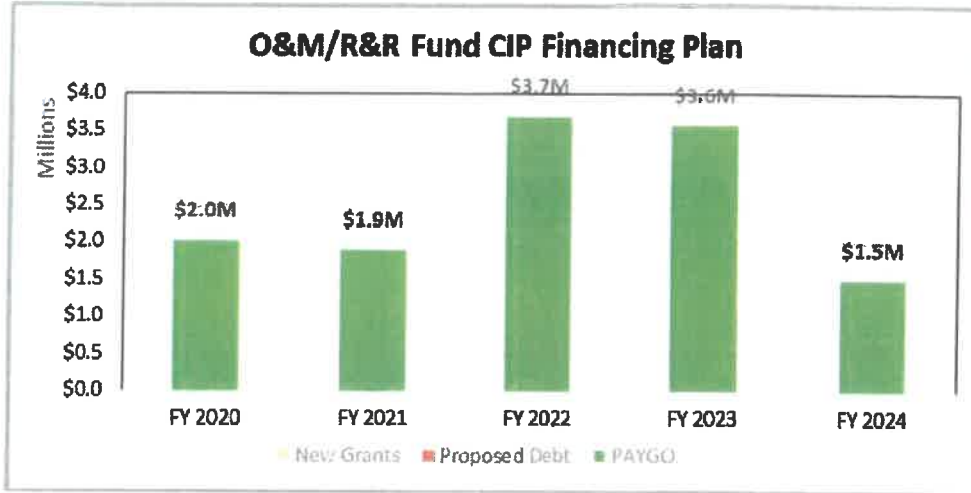
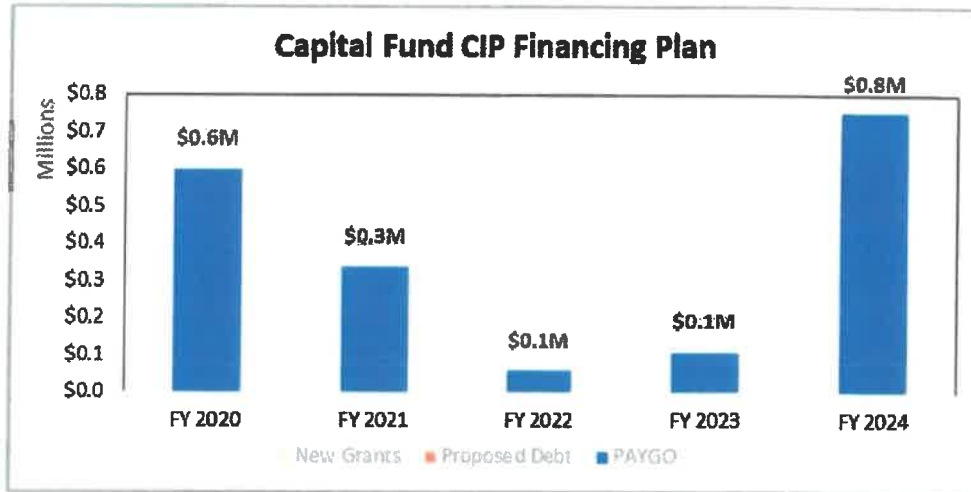


Figure 4-2: FY 2020-2024 CIP Fund Capital Financing Plan



4.4. Financial Planning Scenarios

For this Study, Raftelis and the Authority examined three different financial planning scenarios. The Status Quo Scenario provided the Authority an understanding of the adequacy of current User Charges and Connection Fees in funding the Authority’s expenses and debt obligations. Scenario 1, which is not recommended by Raftelis but approved by the Authority’s Board of Commissioners, is an alternative revenue adjustment schedule that neither meets the Authority’s revenue requirements nor its debt coverage requirements. Note that it incorporates the proposed Connection Fees discussed in Section 5. Scenario 2 presents Raftelis’ recommended financial plan and required revenue adjustments in order to adequately meet the Authority’s O&M, capital, and debt service expenses as well as meeting its required debt coverage ratio. As with Scenario 1, Scenario 2 incorporates the proposed Connection Fees rather than the current fees. Table 4-4 summarizes the different scenarios examined for this study.

Table 4-4: FY 2020-2024 Scenario Revenue Adjustment Comparison

Description	Connection Fees	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative Increase
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023	
Status Quo	Current	0%	0%	0%	0%	0%	0%
Scenario 1 (Approved)	Proposed	8%	8%	8%	8%	8%	46.9%
Scenario 2 (Raftelis Recommended)	Proposed	25%	2.5%	2.5%	2.5%	2.5%	38.0%

4.4.1. STATUS QUO FINANCIAL PLAN (NO REVENUE INCREASE)

The Status Quo financial plan projects the Authority's ability to meet its expenses under current User Charges, which have not been increased since FY 2018. In this section, we calculate revenue under the current User Charges and examine how well it meets the Authority's revenue requirement.

4.4.1.1. Projected Revenues Under Current Rates

The current user charge has been in place since FY 2018, with the previous study conducted in calendar year 2014. Currently, all member agencies pay a flat user charge of \$3,503 per MG of flow into the system. Revenues from the User Charge are calculated by multiplying this charge by the total projected wastewater flows shown in Line 4 of Table 3-2.

Table 4-5: FY 2020-2024 Projected Revenues from Current User Charge

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
User Charge	\$3,503	\$3,503	\$3,503	\$3,503	\$3,503
Total Billed Wastewater Flows (MG)	3,900	3,931	3,963	3,994	4,026
Total User Charge Revenue	\$13,661,700	\$13,770,994	\$13,881,162	\$13,992,211	\$14,104,149

As mentioned in Section 3, the Authority expects that 500 additional units will be added each year between the four member agencies. The Authority charges a Connection Fee for each added EDU. When a wastewater treatment system is developed, it requires significant infrastructure investment to build the system. The initial EDUs served pay for the construction of this infrastructure through their wastewater charges. New EDUs would not have made that investment. Therefore, the Authority charges a uniform Connection Fee per EDU, which can recoup some of the costs of the initial investment and/or expansion of the system. For this Study, Raftelis has also updated the Connection Fees, which are discussed in detail in Section 5. Table 4-6 shows the calculation of the projected Connection Fee revenue under the current fees.

Table 4-6: FY 2020-2024 Projected Revenues from Current Connection Fees

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Connection Fee	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
Additional EDUs per Year	500	500	500	500	500
Total Connection Fee Revenue	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000

Table 4-7 shows the projected total revenues for the Study period. In addition to the User Charge and Connection Fee revenue calculated above, the Authority also earns other revenue from services such as fats, oils, and grease (FOG) tipping fees and processing high strength waste in addition to earning interest.

Table 4-7: Status Quo Scenario FY 2020-2024 Projected Total Revenues

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
User Charge Revenues	\$13,661,700	\$13,770,994	\$13,881,162	\$13,992,211	\$14,104,149
Connection Fee Revenues	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
Interest	\$50,000	\$75,273	\$68,387	\$65,321	\$61,485
Total	\$16,777,900	\$16,909,967	\$17,013,248	\$17,121,232	\$17,229,334

4.4.1.2. Resulting Status Quo Financial Plan

Table 4-8 displays the pro forma of the Authority's combined funds (O&M/R&R Funds and Capital Fund) under current rates over the Study period without any revenue adjustment. The pro forma examines how well the projected revenues in Table 4-7 meet the O&M expenses defined in Table 4-1, debt service obligations in Table 4-2, and the CIP detailed in Table 4-3. Line 16 shows the net cash flow resulting from subtracting these expenses (Line 14) from the projected revenues under current rates (Line 6). The net cash flow for the Study period indicates that the current rates significantly underfund the Authority's financial obligations. Figure 4-3 illustrates the impact of maintaining current rates on the O&M and R&R combined funds as the Capital Fund is designated for expansion capital improvements and separately funded through Connection Fees. Note that, even when narrowing the focus to only the O&M/R&R Fund, current revenues are unable to meet these obligations.

As a result of insufficient revenues, the Authority must supplement revenues with reserve funds, shown in Table 4-8 by subtracting the net cash flow (Line 16) from the beginning cash balance (Line 20). While this solution funds expenses for FY 2020 and FY 2021, beginning in FY 2022, the Authority would be unable to fully fund its expenses. The Authority is unable to meet its combined reserve target, set by Authority policy, or its SRF loan reserve requirement (Figure 4-4) under current rates. In addition, the Authority is unable to meet its required debt coverage ratio during the entire Study period (Lines 23 and 24). The insufficiency of the current rates to meet this debt coverage obligation is also shown in Figure 4-5.

Table 4-8: Status Quo Financial Plan

Line No.	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Source of Funds					
2	User Charge Revenues	\$13,661,700	\$13,770,994	\$13,881,162	\$13,992,211	\$14,104,149
3	Connection Fee Revenues	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
4	Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
5	Interest	\$50,000	\$75,273	\$68,387	\$65,321	\$61,485
6	Total - Source of Funds	\$16,777,900	\$16,909,967	\$17,013,248	\$17,121,232	\$17,229,334
7						
8	Use of Funds					
9	Operating Expenses	\$13,106,467	\$13,877,222	\$14,354,605	\$14,839,707	\$15,341,837
10	R&R Fund CIP	\$2,028,000	\$1,898,758	\$3,709,340	\$3,586,249	\$1,502,217
11	Capital Fund CIP	\$600,000	\$337,683	\$59,537	\$107,977	\$754,980
12	Existing Debt Service	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940
13	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0
14	Total - Use of Funds	\$20,882,328	\$20,996,473	\$23,006,291	\$22,836,872	\$21,901,974
15						
16	Net Cash Flow	(\$4,104,428)	(\$4,086,506)	(\$5,993,043)	(\$5,715,640)	(\$4,672,640)
17						
18	Beginning Cash Balance	\$9,427,089	\$5,322,661	\$1,236,155	(\$4,756,888)	(\$10,472,528)
19						
20	Ending Cash Balance	\$5,322,661	\$1,236,155	(\$4,756,888)	(\$10,472,528)	(\$15,145,168)
21	Total Reserves Target	\$7,703,034	\$7,716,936	\$7,173,072	\$7,196,147	\$6,961,462
22						
23	Debt Coverage	71%	62%	54%	53%	44%
24	Target Coverage	120%	120%	120%	120%	120%

Figure 4-3: Status Quo O&M/R&R Fund Financial Plan

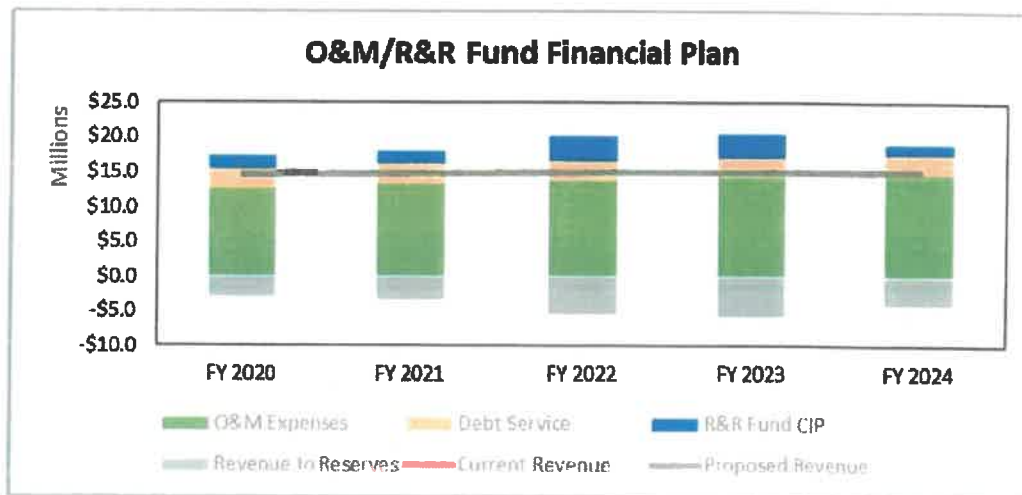


Figure 4-4: Status Quo Total Fund Balance

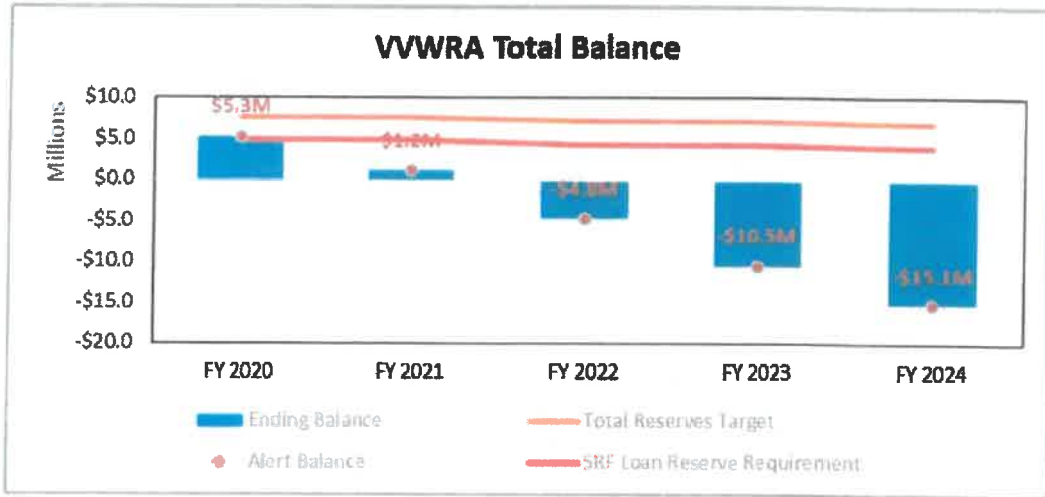
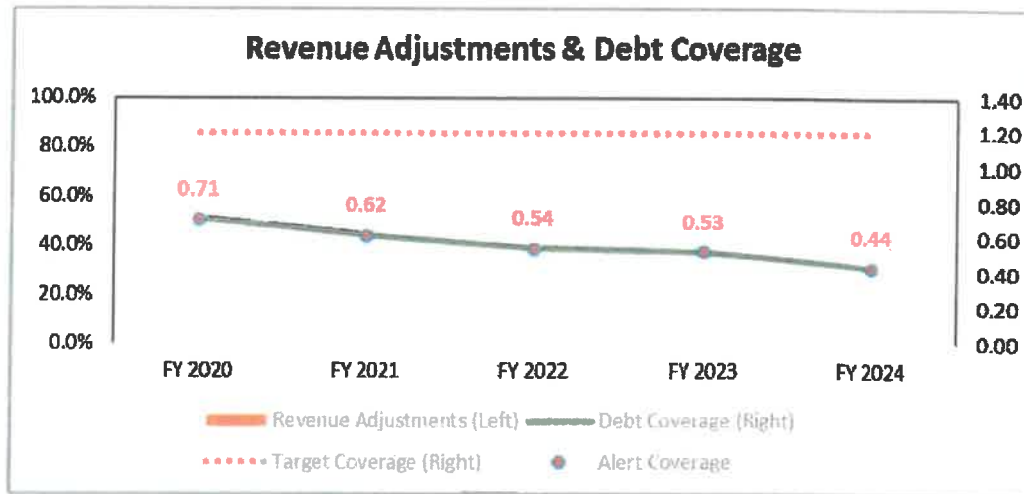


Figure 4-5: Status Quo Debt Coverage



4.4.2. SCENARIO 1 FINANCIAL PLAN (APPROVED BY BOARD)

The Scenario 1 financial plan projects the Authority’s ability to meet its expenses under the Board-approved revenue adjustment schedule, shown below in Table 4-9. This schedule will increase the current User Charge of \$3503/MG by 8-percent annually for the Study period, resulting in a cumulative increase of 46.9-percent. In this section, we calculate revenue under the resulting Scenario 1 User Charges and examine how well it meets the Authority’s revenue requirement. Note, this Board-approved scenario does not meet required debt coverage in all years within the Study period. Therefore, under our fiduciary responsibility as a municipal advisor, Raftelis cannot recommend proceeding with this scenario.

Table 4-9: Scenario 1 FY 2020-2024 Revenue Adjustment Schedule

Description	Connection Fees	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative Increase
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023	
Scenario 1 Percent Increases (Approved)	Proposed	8%	8%	8%	8%	8%	46.9%
Scenario 1 User Charges (Approved)		\$3,784	\$4,087	\$4,414	\$4,768	\$5,150	

4.4.2.1. Projected Revenues Under Scenario 1 Charges

Revenues from the Scenario 1 User Charges are calculated by first escalating the current User Charge by the schedule in Table 4-9. The resulting charge for each year is then multiplied by the projected billed wastewater flows (Line 4 of Table 3-2) to arrive at the total User Charge Revenues under the approved Scenario 1 User Charges. Note that the FY 2020 increase will not be implemented until October 2019.

Table 4-10: FY 2020-2024 Projected Revenues from Approved Scenario 1 User Charge

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Scenario 1 User Charge	\$3,503	\$3,784	\$4,087	\$4,414	\$4,768	\$5,150
Total Billed Wastewater Flows (MG)		3,900	3,931	3,963	3,994	4,026
Total Scenario 1 User Charge Revenue		\$14,481,402	\$16,062,487	\$17,486,266	\$19,036,248	\$20,723,621

Under this scenario, the Authority also expects that 500 additional units (as in the Status Quo Scenario) will be added each year between the four member agencies. Scenario 1 incorporates the proposed Connection Fees, detailed in Section 5. As noted in the previous section, Connection Fee revenues are allocated entirely to Capital Fund costs to pay for construction related to new development. The fee will continue to be a uniform fee per added EDU with only an initial increase in FY 2020 and no further adjustments over the Study period. Table 4-11 shows the projected revenues from the proposed Connection Fees. The Authority expects to incorporate the new Connection Fees in October 2019. Therefore, FY 2020 shows less total revenue from the Connection Fees as it will continue to use the current Connection Fee for the first three months of the fiscal year.

Table 4-11: FY 2020-2024 Projected Revenues from Proposed Connection Fees

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Connection Fee	\$4,000	\$4,679	\$4,679	\$4,679	\$4,679	\$4,679
Additional EDUs per Year		500	500	500	500	500
Total Connection Fee Revenue		\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500

Table 4-12 shows the projected total revenues for the Study period under Scenario 1. This combines the revenue calculated in Table 4-10 and Table 4-11 with the Other Operating Revenues and Interest originally projected in Table 4-7.

Table 4-12: Scenario 1 FY 2020-2024 Projected Total Revenues

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
User Charge Revenues	\$14,481,402	\$16,062,487	\$17,486,266	\$19,036,248	\$20,723,621
Connection Fee Revenues	\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500
Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
Interest	\$50,000	\$79,517	\$76,068	\$76,474	\$76,145
Total	\$17,852,227	\$19,545,204	\$20,965,534	\$22,515,922	\$24,202,966

4.4.2.2. Resulting Scenario 1 Financial Plan

Table 4-13 displays the pro forma of the Authority's combined funds (O&M Fund, R&R Fund, and Capital Fund) under Scenario 1 approved User Charges and Connection Fees over the Study period. The pro forma examines how well the projected revenues in Table 4-12 meet the O&M expenses defined in Table 4-1, debt service obligations in Table 4-2, and the CIP detailed in Table 4-3. Line 16 shows the net cash flow resulting from subtracting these expenses (Line 14) from the projected revenues under Scenario 1 charges (Line 6). The net cash flow improves somewhat under Scenario 1, but still significantly underfunds the Authority's financial obligations until FY 2024, where it begins to show a positive net cash flow. Figure 4-6 illustrates the impact of Scenario 1 on the O&M and R&R Funds. Under this scenario, the Authority begins to meet its debt coverage obligation in FY 2022 (also shown in Table 4-13, Line 23) due to the revenue adjustments combined with the remaining balance in the combined reserves. However, the Authority must make up the entire shortfall (Line 16) in FY 2020 and FY 2021 through reserve funding. As noted before, since the Authority is unable to meet its required debt coverage ratio under this scenario in FY 2020 and FY 2021 (Table 4-13, Line 23 and Figure 4-8), Raftelis cannot recommend that the Authority implement this scenario.

Since this scenario still results in insufficient revenues for FY 2020 through FY 2023, the Authority must supplement revenues with reserve funds, shown in Table 4-13 by subtracting the net cash flow (Line 16) from the beginning cash balance (Line 20). While this scenario avoids fully depleting reserves, it still reduces combined reserves to insufficient levels for its combined reserve target. It also does not meet the Authority's SRF loan reserve requirement (Figure 4-4) in FY 2022 and FY 2023.

Table 4-13: Scenario 1 Financial Plan

Line No.	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Source of Funds					
2	User Charge Revenues	\$14,481,402	\$16,062,487	\$17,486,266	\$19,036,248	\$20,723,621
3	Connection Fee Revenues	\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500
4	Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
5	Interest	\$50,000	\$79,517	\$76,068	\$76,474	\$76,145
6	Total - Source of Funds	\$17,852,227	\$19,545,204	\$20,965,534	\$22,515,922	\$24,202,966
7						
8	Use of Funds					
9	Operating Expenses	\$13,106,467	\$13,877,222	\$14,354,605	\$14,839,707	\$15,341,837
10	R&R Fund CIP	\$2,028,000	\$1,898,758	\$3,709,340	\$3,586,249	\$1,502,217
11	Capital Fund CIP	\$600,000	\$337,683	\$59,537	\$107,977	\$754,980
12	Existing Debt Service	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940
13	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0
14	Total - Use of Funds	\$20,882,328	\$20,996,473	\$23,006,291	\$22,836,872	\$21,901,974
15						
16	Net Cash Flow	(\$3,030,101)	(\$1,451,269)	(\$2,040,757)	(\$320,950)	\$2,300,992
17						
18	Beginning Cash Balance	\$9,427,089	\$6,396,988	\$4,945,719	\$2,904,962	\$2,584,012
19						
20	Ending Cash Balance	\$6,396,988	\$4,945,719	\$2,904,962	\$2,584,012	\$4,885,005
21	Total Reserves Target	\$7,703,034	\$7,716,936	\$7,173,072	\$7,196,147	\$6,961,462
22						
23	Debt Coverage	92%	116%	135%	178%	206%
24	Target Coverage	120%	120%	120%	120%	120%

Figure 4-6: Scenario 1 O&M/R&R Fund Financial Plan

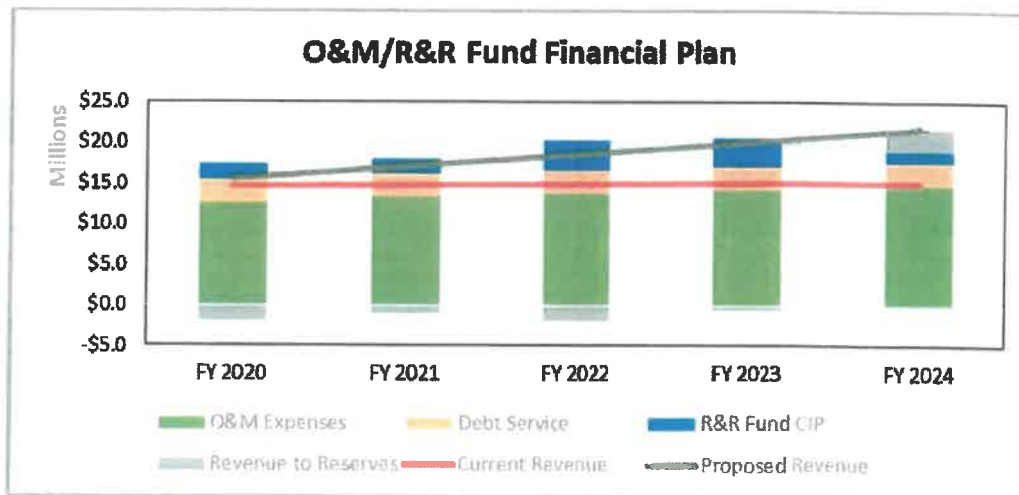


Figure 4-7: Scenario 1 Total Fund Balance

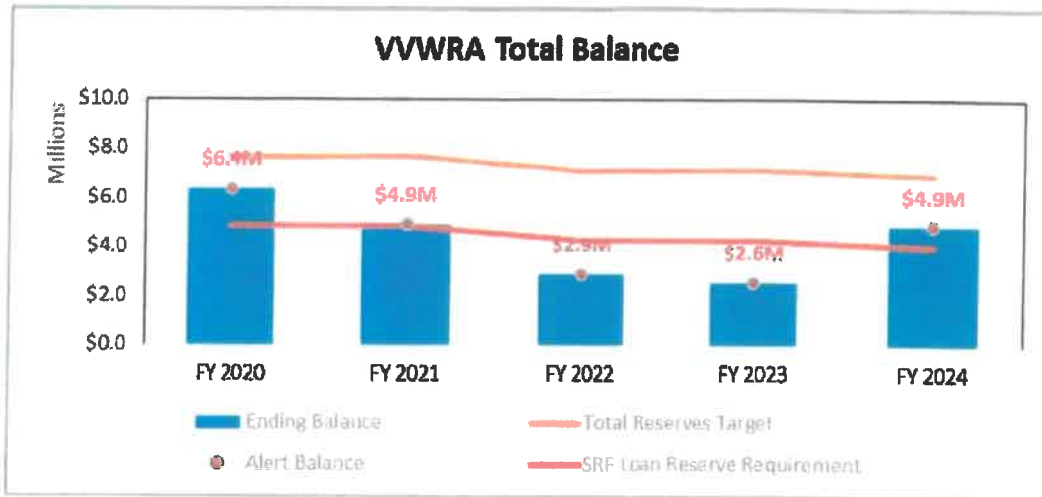
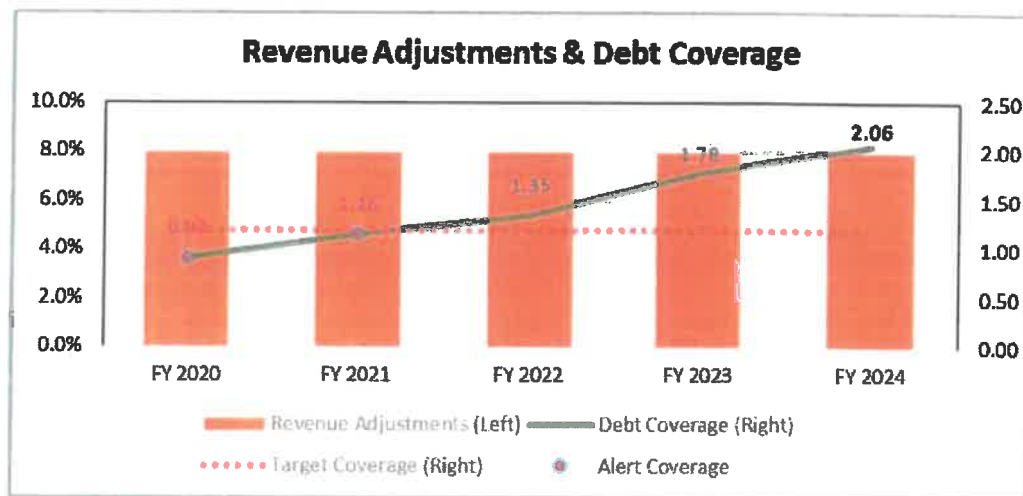


Figure 4-8: Scenario 1 Debt Coverage



4.4.3. SCENARIO 2 FINANCIAL PLAN (RAFTELIS RECOMMENDED)

Raftelis recommends the Scenario 2 Financial Plan, which projects the Authority funding its expenses while also meeting its debt coverage and reserve requirements for the entire Study period. The Scenario 2 revenue adjustments are shown below in Table 4-14. This scenario also incorporates the proposed Connection Fees effective October 2019. This schedule will increase the current User Charge of \$3,503/MG by 25-percent in October 2019 so that the Authority can begin meeting its debt coverage and reserve obligations. Raftelis then recommends an annual adjustment of 2.5-percent for the remaining years in the Study period, resulting in a cumulative increase of 38.0% for the 5-year Study period. In this section, we calculate revenue under the Scenario 2 User Charges resulting from this rate adjustment schedule and discuss how it meets the Authority’s expenses in addition to its debt coverage and SRF reserve requirements.

Table 4-14: Scenario 2 FY 2020-2024 Revenue Adjustment Schedule

Description	Connection Fees	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Cumulative Increase
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023	
Scenario 2 (Raftelis-Recommended)	Proposed	25%	2.5%	2.5%	2.5%	2.5%	38.0%
Scenario 2 User Charges		\$4,379	\$4,489	\$4,602	\$4,718	\$4,836	

4.4.3.1. Projected Revenues Under Scenario 2 Rates

As in the previous two scenarios, revenues from the Scenario 2 User Charge are calculated by first escalating the current User Charge by the schedule in Table 4-14. The resulting charge for each year is then multiplied by the projected billed wastewater flows (Line 4 of Table 3-2) to arrive at the total User Charge Revenues under the recommended Scenario 2 User Charges. Note that the FY 2020 increase will not be implemented until October 2019, thus the current rate is applied to the first three months' usage of the fiscal year.

Table 4-15: FY 2020-2024 Projected Revenues from Raftelis-Recommended Scenario 2 User Charge

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Scenario 2 User Charge	\$3,503	\$4,379	\$4,489	\$4,602	\$4,718	\$4,836
Total Billed Wastewater Flows (MG)		3,900	3,931	3,963	3,994	4,026
Total Scenario 2 User Charge Revenue		\$16,223,269	\$17,644,086	\$18,229,869	\$18,835,101	\$19,460,426

Under this scenario, the Authority also expects that 500 additional units (as in the Status Quo Scenario) will be added each year between the four member agencies. Like Scenario 1, Scenario 2 incorporates the proposed Connection Fees, detailed in Section 5. Again, Connection Fee revenues are allocated entirely to Capital Fund costs to pay for construction related to new development. The fee will continue to be a uniform fee per added EDU with only an initial increase in FY 2020 and no further adjustments over the Study period. Table 4-16 repeats the projected revenues from the proposed Connection Fees first calculated in Table 4-11. Note again that FY 2020 shows less total revenue from the Connection Fees as it will continue to use the current Connection Fee for the first three months of the fiscal year.

Table 4-16: FY 2020-2024 Projected Revenues from Proposed Connection Fees

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Connection Fee	\$4,000	\$4,679	\$4,679	\$4,679	\$4,679	\$4,679
Additional EDUs per Year		500	500	500	500	500
Total User Charge Revenue		\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500

Table 4-17 shows the projected total revenues for the Study period under Scenario 2. This combines the revenue calculated in Table 4-15 and Table 4-16 with the Other Operating Revenues originally projected in Table 4-7 and updated Interest revenue. Note that the Interest Revenue increases because the O&M/R&R Fund sees a positive

fund balance, which then gets added to the Interest earned through the CIP Fund's positive balance (note that this is the total Interest Revenue shown both in Table 4-7 and Table 4-12).

Table 4-17: Scenario 2 FY 2020-2024 Projected Total Revenues

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
User Charge Revenues	\$16,223,269	\$17,644,086	\$18,229,869	\$18,835,101	\$19,460,426
Connection Fee Revenues	\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500
Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
Interest	\$50,000	\$81,643	\$76,068	\$76,474	\$76,145
Total	\$19,594,094	\$21,128,928	\$21,709,137	\$22,314,775	\$22,939,771

4.4.3.2. Resulting Scenario 2 Financial Plan

Table 4-18 displays the pro forma of the Authority's combined funds (O&M Fund, R&R Fund, and Capital Fund) under Scenario 2 Raftelis-recommended User Charges and proposed Connection Fees over the Study period. The pro forma examines how well the projected revenues in Table 4-17 meet the O&M expenses defined in Table 4-1, debt service obligations in Table 4-2, and the CIP detailed in Table 4-3. Line 16 shows the net cash flow resulting from subtracting these expenses (Line 14) from the projected revenues under Scenario 2 charges (Line 6). The net cash flow, while only positive in FY 2021 and FY 2024 (Line 16), results in a significantly lower burden on reserves during the Study period. Note that, in order to result in a consistently positive cash flow, the Authority would have to implement higher rate adjustments than proposed in either Scenario 1 or Scenario 2. Figure 4-9 illustrates the impact of Scenario 1 on the O&M Fund and R&R Fund combined. In Scenario 2, the Authority's reserves are high enough for the entirety of the Study period to exceed the SRF Loan Reserve Requirement and meet the Authority's target reserves for all years except FY 2022 and FY 2023 (Figure 4-10). Importantly, this scenario also enables the Authority to meet its debt coverage requirements in all years of the Study period (Figure 4-11 and Table 4-18, Line 23).

Table 4-18: Scenario 2 Financial Plan

Line No.	Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	Source of Funds					
2	User Charge Revenues	\$16,223,269	\$17,644,086	\$18,229,869	\$18,835,101	\$19,460,426
3	Connection Fee Revenues	\$2,254,625	\$2,339,500	\$2,339,500	\$2,339,500	\$2,339,500
4	Other Operating Revenues	\$1,066,200	\$1,063,700	\$1,063,700	\$1,063,700	\$1,063,700
5	Interest	\$50,000	\$81,643	\$76,068	\$76,474	\$76,145
6	Total - Source of Funds	\$19,594,094	\$21,128,928	\$21,709,137	\$22,314,775	\$22,939,771
7						
8	Use of Funds					
9	Operating Expenses	\$13,106,467	\$13,877,222	\$14,354,605	\$14,839,707	\$15,341,837
10	R&R Fund CIP	\$2,028,000	\$1,898,758	\$3,709,340	\$3,586,249	\$1,502,217
11	Capital Fund CIP	\$600,000	\$337,683	\$59,537	\$107,977	\$754,980
12	Existing Debt Service	\$5,147,861	\$4,882,810	\$4,882,810	\$4,302,940	\$4,302,940
13	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0
14	Total - Use of Funds	\$20,882,328	\$20,996,473	\$23,006,291	\$22,836,872	\$21,901,974
15						
16	Net Cash Flow	(\$1,288,234)	\$132,455	(\$1,297,154)	(\$522,097)	\$1,037,797
17						
18	Beginning Cash Balance	\$9,427,089	\$8,138,855	\$8,271,310	\$6,974,156	\$6,452,059
19						
20	Ending Cash Balance	\$8,138,855	\$8,271,310	\$6,974,156	\$6,452,059	\$7,489,856
21	Total Reserves Target	\$7,703,034	\$7,716,936	\$7,173,072	\$7,196,147	\$6,961,462
22						
23	Debt Coverage	126%	149%	151%	174%	177%
24	Target Coverage	120%	120%	120%	120%	120%

Figure 4-9: Scenario 2 O&M/R&R Fund Financial Plan

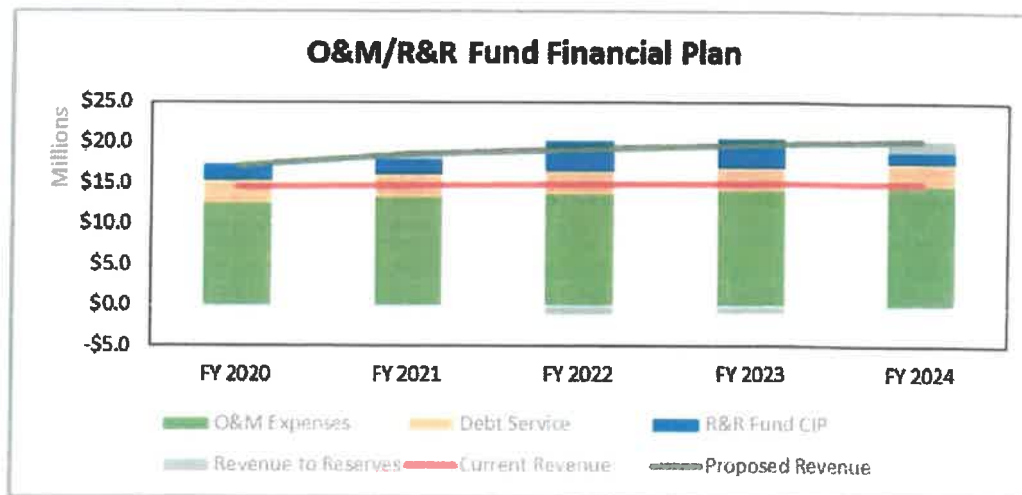


Figure 4-10: Scenario 2 Total Fund Balance

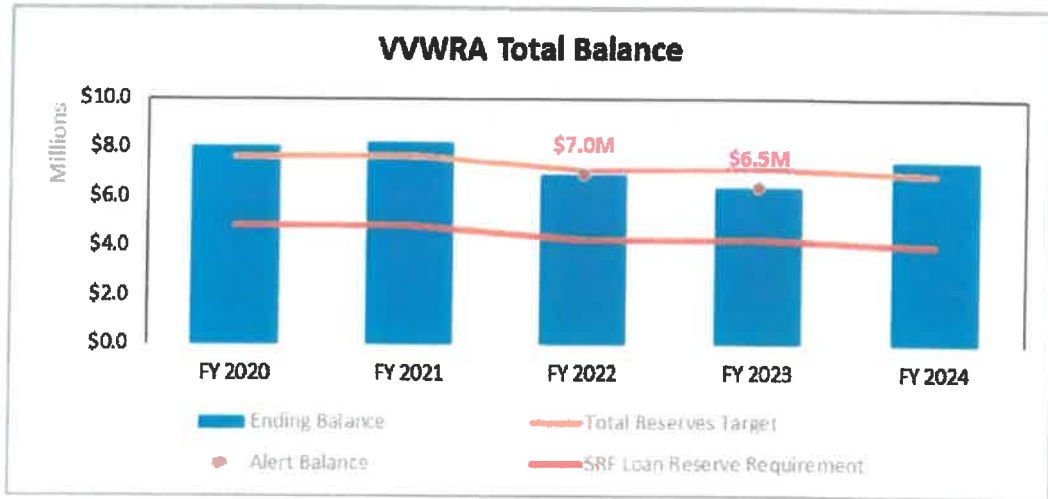
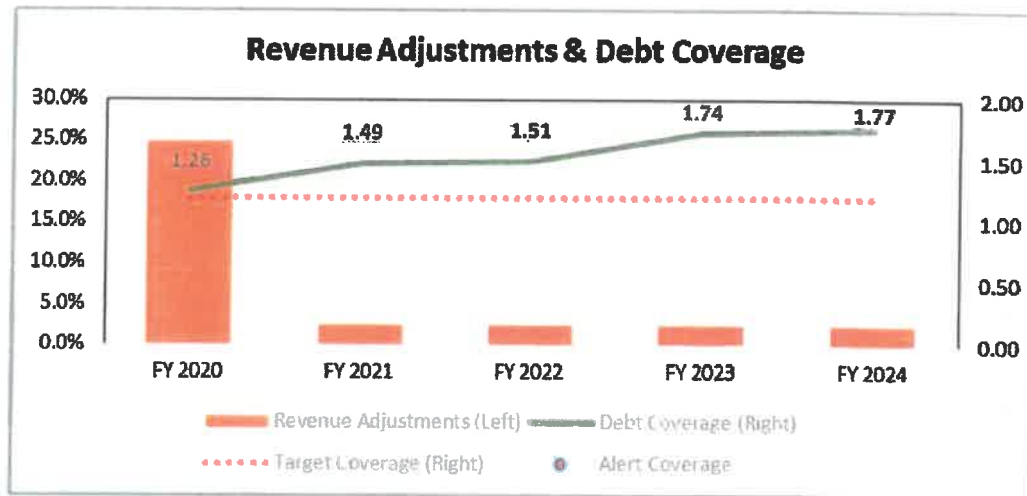


Figure 4-11: Scenario 2 Debt Coverage



4.5. Proposed User Charges

Table 4-19 shows the proposed User Charge rates under Scenario 1 and Scenario 2 over the five-year Study period. The User Charge rates shown below were previously derived in Table 4-9 for Scenario 1 and Table 4-14 for Scenario 2.

Table 4-19: Proposed User Charges (per MG)

Description	Current FY 2019	Proposed FY 2020	Proposed FY 2021	Proposed FY 2022	Proposed FY 2023	Proposed FY 2024
Date Effective		Oct. 2019	July 2020	July 2021	July 2022	July 2023
Scenario 1 (Approved)	\$3,503	\$3,784	\$4,087	\$4,414	\$4,768	\$5,150
Scenario 2 (Raftelis Recommended)	\$3,503	\$4,379	\$4,489	\$4,602	\$4,718	\$4,836

5. Connection Fee Update

5.1. Economic and Legal Framework

For publicly owned wastewater systems, most of the assets are typically paid for by the contributions of existing customers through rates, charges, and taxes. In service areas that incorporate new customers, the infrastructure developed by previous customers is generally extended toward the service of new customers. Existing customers' investment in the existing system capacity allows newly connecting customers to take advantage of unused surplus capacity. To further economic equality among new and existing customers, in turn, new connectors will typically buy into the existing and pre-funded facilities based on the percentage of remaining available system capacity, effectively putting them on par with existing customers. In other words, the new users are buying into the existing system through a payment for the portion of facilities that has already been constructed in advance of new development. In addition, new customers will be responsible for funding new assets that will need to be built to expand the system to meet the increased demand.

5.1.1. ECONOMIC FRAMEWORK

The basic economic philosophy behind connection fees (also known as capacity fees) is that the costs of providing wastewater service should be paid for by those that receive utility from the product. In order to effect fair distribution of the value of the system, the fee should reflect a reasonable estimate of the cost of providing capacity to new users, and not unduly burden existing users. Accordingly, many utilities make this philosophy one of their primary guiding principles when developing their connection fee structure.

The philosophy that service should be paid for by those that receive utility from the product is often referred to as "growth-should-pay-for-growth." The principal is summarized in the American Water Works Association (AWWA) Manual M26, Water Rates and Related Charges:

The purpose of designing customer-contributed-[connection fees] is to prevent or reduce the inequity to existing customers that results when these customers must pay the increase in water rates that are needed to pay for added plant costs for new customers. Contributed capital reduces the need for new outside sources of capital, which ordinarily has been serviced from the revenue stream. Under a system of contributed capital, many water utilities are able to finance required facilities by use of a 'growth-pays-for-growth' policy.

5.1.2. LEGAL FRAMEWORK

The Authority reserves broad authority over the pricing of wastewater connection fees. The most salient limitation on this authority is the requirement that recovery costs on new development bear a reasonable relationship to the needs and benefits brought about by the development. Courts have long used a standard of reasonableness to evaluate the legality of connection fees. The basic statutory standards governing wastewater connection fees are embodied by Government Code Sections 66013, 66016, 66022 and 66023. Government Code Section 66013, in particular, contains requirements specific to pricing wastewater connection fees:

"Capacity charge" means a charge for public facilities in existence at the time a charge is imposed or 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, including supply or capacity contracts for rights or entitlements, real property interests, and entitlements and other rights of the local agency involving capital expense relating to its use of existing or new public facilities. A "capacity charge" does not include a commodity charge.

Section 66013 also requires that:

- » Local agencies must follow a process set forth in the law, making certain determinations regarding the purpose and use of the fee; they must establish a nexus or relationship between a development project and the public improvement being financed with the fee.

5.1.3. METHODOLOGIES

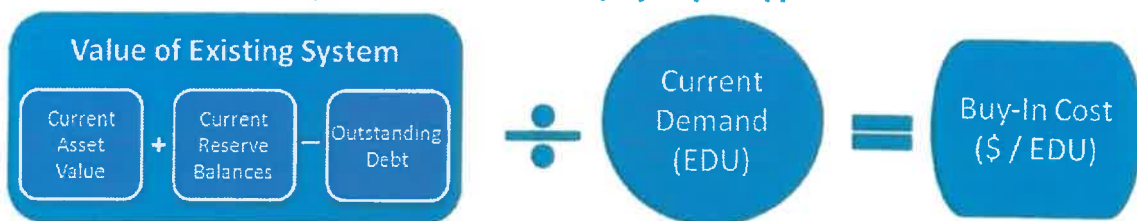
There are two primary steps in calculating connection fees: (1) determining the cost of capital related to new service connections, and (2) allocating those costs equitably to each connection. There are several available methodologies for calculating connection fees. The various approaches have evolved largely around the basis of changing public policy, legal requirements, and the unique and special circumstances of every local agency. However, there are four general approaches that are widely accepted and appropriate for wastewater connection fees. They are the “system buy-in”, “capacity buy-in”, “incremental-cost” and “hybrid” method.

5.1.3.1. System Buy-in Approach

The system buy-in approach rests on the premise that new customers are entitled to service at the same price as existing customers. However, existing customers have already developed the facilities that will serve new customers. Under this approach, new customers pay only an amount equal to the current system value, either using the original cost or replacement cost as the valuation basis and either netting the value of depreciation or not. This net investment, or value of the system, is then divided by the current demand of the system – number of customers (or equivalent units) – to determine the buy-in cost per EDU.

For example, if the existing system has 100 units of average usage and the new connector uses an equivalent unit, then the new customer would pay 1/100 of the total value of the existing system. By contributing this Connection Fee, the new connector has bought into the existing system. The user has effectively acquired a financial position on par with existing customers and will face future capital challenges on equal financial footing with those customers. This approach is suited for agencies that have capacity in their system and are essentially close to build-out. Figure 5-1 shows the framework for calculating the equity buy-in capacity fee.

Figure 5-1: Formula for Equity Buy-In Approach



5.1.3.1.1. Asset Valuation Approaches

As stated earlier, the first step is to determine the asset value of the capital improvements required to provide services to new users. However, under the system buy-in approach, the facilities have already been constructed, therefore the goal is to determine the value of the existing system/facilities. To estimate the asset value of the existing facilities required to furnish services to new users, various methods are employed. The principal methods commonly used to value a utility's existing assets are original cost and replacement cost.

1. **Original Cost (OC):** The principal advantages of the original cost method lie in its relative simplicity and stability, since the recorded costs of tangible property are held constant. The major criticism levied against original cost valuation pertains to the disregard of changes in the value of money, which are attributable to inflation and other factors. As evidenced by history, prices tend to increase rather than to remain constant. Because the value of money varies inversely with changes in price, monetary values in

most recent years have exhibited a definite decline; a fact not recognized by the original cost approach. This situation causes further problems when it is realized that most utility systems are developed over time on a piecemeal basis as demanded by service area growth. Consequently, each property addition was paid for with dollars of different purchasing power. When these outlays are added together to obtain a plant value the result can be misleading.

2. **Replacement Cost (RC):** Changes in the value of the dollar over time, at least as considered by the impacts of inflation, can be recognized by replacement cost asset valuation. The replacement cost represents the cost of duplicating the existing utility facilities (or duplicating its function) at current prices. Unlike the original cost approach, the replacement cost method recognizes price level changes that may have occurred since plant construction. The most accurate replacement cost valuation would involve a physical inventory and appraisal of plant components in terms of their replacement costs at the time of valuation. However, with original cost records available, a reasonable approximation of replacement cost plant value can most easily be ascertained by trending historical original costs. This approach employs the use of cost indices to express actual capital costs experienced by the utility in terms of current dollars. An obvious advantage of the replacement cost approach is that it gives consideration to changes in the value of money over time.
3. **Original Cost Less Depreciation (OCLD) or Replacement Cost Less Depreciation (RCLD):** Considerations of the current value of utility facilities may also be materially affected by the effects of age and depreciation. Depreciation takes into account the anticipated losses in plant value caused by wear and tear, decay, inadequacy, and obsolescence. To provide appropriate recognition of the effects of depreciation on existing utility facilities, both the original cost and replacement cost valuation measures can also be expressed on an OCLD and RCLD basis. These measures are identical to the aforementioned valuation methods, with the exception that accumulated depreciation is computed for each asset account based upon its age or condition, and deducted from the respective total original cost or replacement cost to determine the OCLD or RCLD measures of plant value.

5.1.3.2. Capacity Buy-In Approach

The capacity buy-in approach is based on the same premise as that for the system buy-in approach – that new customers are entitled to service at the same rates as existing customers. The difference between the two approaches is that for the capacity buy-in approach, for each major asset, the value is divided by its capacity. This approach presents a major challenge as determining the capacity of each major asset may be problematic or not available. The system is designed for peak use and customer behavior fluctuates based on economic and weather conditions. Figure 5-2 shows the framework for calculating a fee based on the Capacity Buy-In Approach.

Figure 5-2: Formula for Capacity Buy-In Approach

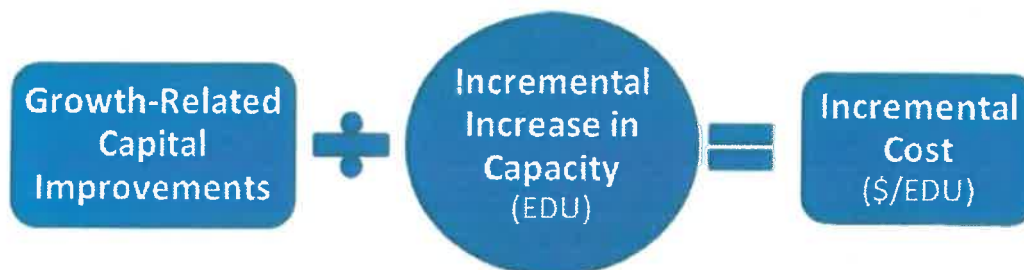


5.1.3.3. Incremental Cost Approach

The incremental method is based on the premise that new development (new users) should pay for the additional capacity and expansions necessary to serve the new development. This method is typically used where there is little or no capacity available to accommodate growth and expansion is needed to service the new development. Under the incremental method, growth-related capital improvements are allocated to new development based on their estimated usage or capacity requirements, irrespective of the value of past investments made by existing customers.

For instance, if it costs X dollars (\$X) to provide 100 additional equivalent units of capacity for average usage and a new connector uses one of those equivalent units, then the new user would pay \$X/100 to connect to the system. In other words, new customers pay the incremental cost of capacity. As with the buy-in approach, new connectors will effectively acquire a financial position that is on par with existing customers. Use of this method is generally considered to be most appropriate when a significant portion of the capacity required to serve new customers must be provided by the construction of new facilities. Figure 5-3 shows the framework for calculating the incremental cost capacity fee.

Figure 5-3: Formula for the Incremental Cost Approach



5.1.3.4. Hybrid Approach

The hybrid approach is typically used where some capacity is available to serve new growth but additional expansion is still necessary to accommodate new development. Under the hybrid approach the Connection Fee is based on the summation of the existing capacity and any necessary expansions.

In utilizing this methodology, it is important that system capacity costs are not double-counted when combining costs of the existing system with future costs from the Capital Improvement Program (CIP). CIP costs associated with repair and replacement of the existing system should not be included in the calculation, unless specific existing facilities which will be replaced through the CIP can be isolated and removed from the existing asset inventory and cost basis. In this case, the rehabilitative costs of the CIP essentially replace the cost of the relevant existing assets in the existing cost basis. Capital improvements that expand system capacity to serve future customers may be included in proportion to the percentage of the cost specifically required for expansion of the system. Figure 5-4 summarizes the framework for calculating the hybrid Connection Fee.

Figure 5-4: Formula for the Hybrid Approach



5.2. Current Connection Fee

The Authority has not updated its Connection Fees since 2014. Therefore, they are no longer reflective of new development's share of the facilities. The Authority utilizes a uniform per EDU Connection Fee that is based on expected demand of one single family residential customer (the equivalent dwelling unit). This translates other customer types to an equivalent number of single-family residential customers. The assumed gallons per day of wastewater flow contributed by one EDU is 200 gallons.

Table 5-1: Current Connection Fee

Description	Connection Fee
1 EDU	\$4,000

5.3. Proposed Connection Fee

The Authority's wastewater system has capacity within the existing system to serve future growth; however, there are also specific growth-related capital projects necessary accommodate new equivalent dwelling units. Therefore, we utilized the hybrid approach.

5.3.1. BUY-IN COMPONENT

The first step in determining the buy-in component of the hybrid connection fee is to determine the value of the existing system. As mentioned above, there are several methods of determining the current value of assets, but, for the purposes of this Study, Replacement Cost was used to account for today's replacement cost for system improvements. This also reflects the approach utilized in the last Connection Fee Study in 2014.

To accomplish this, the Authority provided fixed asset records on the original cost of the system. Replacement cost was then estimated by adjusting original costs to reflect what might be expected if a similar facility were constructed today. This is achieved by escalating the original construction costs by a construction cost index. Engineering News-Record's average Construction Cost Index for 20-cities (ENR CCI) is commonly used for this purpose. It reflects the average costs of a particular basket of construction goods over time. Raftelis used the list year 2018 with an index of 10,985 to inflate the replacement cost of each asset, except land, which was inflated by 2.0-percent.

Table 5-2: System Asset Valuation

Functional Category	Original Cost	Replacement Cost
Land	\$779,136	\$1,383,704
Pipelines	\$67,544,011	\$103,654,409
Buildings	\$146,214,124	\$162,095,292
Buildings and Equipment	\$56,279,649	\$124,331,898
Plant Equipment	\$15,669,080	\$19,191,513
Office Equipment	\$547,438	\$993,462
Vehicles	\$841,568	\$1,204,719
Land Improvements	\$9,738,125	\$12,300,188
Computer Software	\$228,174	\$253,773
Total	\$297,841,305	\$425,408,957

The total system replacement cost represents the estimated cost of replacing the entire system in 2018 dollars. Next, new users will pay their share of any outstanding debt through wastewater rates after joining the system. Therefore, the value of the system in Figure 5-2 should be reduced by the amount of the outstanding principal so that new users are not double-charged for this debt. Table 5-3 shows the resulting net value of the existing system in Line 3 (Line 1 – Line 2). This net value is then divided by the estimated total system capacity of 19.00 MGD, shown in Line Four. This results in the buy-in component per MGD shown in Line Five.

Table 5-3: Buy-In Component (\$/MGD) Calculation

Line No.	Description	Value
1	Total Asset Value (Replacement Cost)	\$425,408,957
2	Less Total Outstanding Debt Principal	\$91,273,216
3	Value of Existing System	\$334,135,741
4	Total System Capacity (MGD)	19.00
5	Buy-in Component (\$/MGD)	\$17,586,092

5.3.2. INCREMENTAL COMPONENT

The incremental component is intended to address the additional capacity and expansions necessary to serve the new development. Table 5-4 indicates the total debt service (principal and interest) allocated to the Capital Fund for the exclusively growth-related portion of capital projects that serve both current and projected expansion customers. In addition, this component includes the exclusively growth-related clarifier upgrades (Line 2). These result in the total capital costs allocated to growth listed in Line 3. This total cost is then divided by the incremental available system capacity of 7.66 million gallons per day (Line 4) to arrive at the Incremental Component (Line 5) of the Connection Fee.

Table 5-4: Incremental Component (\$/MGD) Calculation

Line No.	Description	Value
1	Growth-Related Debt Service	\$39,975,456
2	Additional Growth-Related CIP (Clarifier Upgrades)	\$4,500,000
3	Capital Costs Allocated to Growth	\$44,475,456
4	Incremental System Capacity (MGD)	7.66
5	Incremental Component (\$/MGD)	\$5,806,195

5.3.3. PROPOSED TOTAL CONNECTION FEE

To arrive at the total proposed connection fee, we combine the Buy-in and Incremental Components per MGD derived in Table 5-3 and Table 5-4. This is then converted from \$/MGD to \$/EDU using the assumed 200 GPD for each EDU, resulting in the Proposed Connection Fee in Line 5. The Proposed Connection Fee will remain constant with no adjustments for the entire Study period.

Table 5-5: Proposed FY 2020-2024 per EDU Connection Fee

Line No.	Description	Value
1	Buy-In Component (\$/MGD)	\$17,586,092
2	Incremental Component (\$/MGD)	\$5,806,195
3	Proposed Connection Fee (\$/MGD)	\$23,392,287
4	Assumed GPD per EDU	200
5	Proposed Connection Fee (\$/EDU)	\$4,679

Table 5-6 provides an impact analysis of the proposed Connection Fee over the current Connection fee. The updated fee results in an increase of \$679 per EDU.

Table 5-6: Proposed Connection Fee Impact

Description	Impact
Proposed Connection Fee (\$/EDU)	\$4,679
Current Connection Fee (\$/EDU)	\$4,000
Difference (\$)	\$679
Difference (%)	17.0%

EXHIBIT B

TABLE I
CONNECTION FEE SCHEDULE
CONNECTION TYPES AND DEFINITIONS

A. NEW UNITS

1. RESIDENTIAL

All dwelling units shall be charged on a total fixture unit (F.U.) basis. The fee for each fixture unit is \$200.00. A typical single family home will have twenty (20) fixture units, which is considered to be one equivalent dwelling unit (EDU). The connection fee for one EDU is \$4,000.679.00.

For single family homes, mobile homes, multiple family dwellings (apartments), condominiums, motels/hotels (rooms only), or any other form of residential property, the residential column of Table II shall be used for determining fixture units. In the case of jointly used facilities (such as laundry rooms, cabanas, clubhouses, etc.) for serving more than one residential unit, these additional fixture units shall be determined using the public use column of Table II.

2. COMMERCIAL

Each commercial building, office, store, motel/hotels (restaurant and service facilities) or separately owned or operated commercial space, or like structure, or any other similar structure or use, with a separate service connection, shall be billed on a fixture unit basis with each fixture unit charged at \$200.00. The public use column of Table II shall be used for determining the number of fixture units. In addition, sewerage facility fees shall also be collected for those categories listed in Table III.

3. INDUSTRIAL

Connection fees for Users requiring an Industrial Wastewater Permit will be calculated according to Ordinance No. 002 (Section 3.02) by VVWRA and will be based on wastewater quantity and strength contained in the application for permit for industrial wastewater discharge and other pertinent data. The Wastewater Ordinance defines which dischargers are industrial and provides instructions for completing the application for industrial discharge. The connection fee for each capacity unit (CU) for an industrial discharger is \$4,000.679.00.

For purposes of this Ordinance, the following types of facilities shall be considered Industrial Users in addition to any definition contained in the Wastewater Ordinance:

1. Bakeries.
2. Commercial facilities with garbage grinders of 2 hp or greater may be classified as Industrial Users.
3. Laundries.
4. Facilities with servicebay or garage facilities that have floor drains in the work area.
5. Facilities with swimming pools open to general public use if the swimming pool, filters, or associated equipment have floor drains in the work area or connections to the sewer system.
6. Hospitals.
7. Prisons Industrial Users.

B. EXISTING UNITS

1. SUPPLEMENTAL FEES

a. Supplemental fees shall be collected for modifications that result in the addition of fixture units to all structures and units connected to the sewer system. The fee shall be based only on the actual number of fixtures added using the appropriate fixture unit tables.

b. Exemptions to Supplemental Fees:

1. Additions to residential units that previously paid for their connections on a flat fee-EDU basis (as opposed to a total fixture unit basis)

2. Additions to residential units that connect as exempt properties developed as of July 1, 1982 (See Section 11.2 of VVWRA Ordinance No. 80-19)

c. Supplemental fees shall be collected for modifications by Industrial Users that result in increasing the original number of flow or strength of capacity units attributable to a parcel or improvement.

2. FIXTURE UNIT TABLE

For purposes of determining the fixture unit count applicable to any development under this Ordinance, the "Table of Equivalent Fixture Units" most recently adopted by VVWRA shall be utilized.

EXHIBIT C

TABLE IV
CONNECTION FEE SCHEDULE
COST OF EXPANSION

For support purposes, the rate schedules contained in this Ordinance are based upon the findings of the Victor Valley Wastewater Reclamation Authority ~~Capital Improvement Fund and Connection Fee Study~~ Wastewater Rate Study, which was completed by ~~Black and Veatch~~ Raftelis in ~~February, 2014~~ August 2019 ("~~Connection Fee Study~~"). The Wastewater Rate Study ~~Connection Fee Study~~ and its findings and recommendations were approved by the Board of Commissioners on ~~February 20, 2014~~ September 19, 2019.



VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY
Report/Recommendation to the Board of Commissioners

September 19, 2019

FROM Brian Macy, Interim General Manager

TO Board of Commissioners

SUBJECT Scheduling of the Second Reading of Ordinance 002: Connection Fee Ordinance

RECOMMENDATION

It is recommended that the Board of Commissioners authorize the Interim General Manager to schedule the second reading of Ordinance 002: Connection Fee Ordinance for October 17, 2019 at 8:30 AM.

REVIEW BY OTHERS

This recommendation was reviewed by Piero Dallarda, Legal Counsel

BACKGROUND INFORMATION

On direction from the Board, the first reading of Ordinance 002 was scheduled for September 19, 2019. Two public hearings are required to revise an ordinance. Because the Board needs to take action and direct staff to do so, staff is requesting such direction.

FINANCIAL IMPACT

RELATED IMPACTS



VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY
Report/Recommendation to the Board of Commissioners

September 19, 2019

FROM: Latif Laari, Business Applications Manager

TO: Brian Macy, Interim General Manager

SUBJECT: Amendment to Larry Walker and Associates Professional Services Agreement to complete the Sanitary Sewer Management Plan Update

RECOMMENDATION

It is recommended that the Board of Commissioners approve an amendment to the existing professional services agreement with Larry Walker and Associates in order complete the VVWRA Sanitary Sewer Management Plan (SSMP) Update. This amendment will increase the professional services agreement fee by \$9,100.00 to a total of \$18,100.00.

SUMMARY

The SSMP update is a regulatory requirement and required by the California State Water Resources Control Board to be completed every five years. The Larry Walker and Associates Professional Services Agreement was approved during the August 16, 2018 Board Meeting in the amount of \$9,000.00 for the completion of the SSMP audit. The SSMP audit was completed in early 2019. As Larry Walker and Associates completed the SSMP audit on-time and on-budget, VVWRA staff is recommending that Larry Walker and Associates also complete the SSMP update will be completed by the end of 2019. A scope of work and proposed fee letter is attached.

REVIEW BY OTHERS

This recommendation has been prepared by Latif Laari, Business Applications Manager and reviewed by Robert Coromina, Director of Administration, Alton Anderson, Construction Manager, Robert Townsend, Environmental Compliance Inspector, and Chieko Keagy, Controller.

BACKGROUND INFORMATION

The California State Water Resources Control Board (SWRCB) promulgated a waste discharge requirement (WDR) permit on May 2, 2006, to regulate sanitary sewer systems. This permit is

known as SWRCB Order No. 2006-0003, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order). On July 30, 2013, Attachment A to the Order was promulgated and became effective on September 9, 2013 and is known as Attachment A, SWRCB Order No. WQO 2013-0058-EXEC, amending the Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (together these documents constitute the SSS WDR).

The SSR WDR requires local public sewer collection system agencies, referred to as “Enrollees,” to electronically report all Sanitary Sewer Overflows (SSO’s) and develop a Sewer System Management Plan (SSMP). SSMPs must be self-audited at least every two (2) years and updated every five (5) years from the original adoption date by the Enrollee’s governing board. The five-year SSMP update must also be approved and certified as do all significant updates to the SSMP.

The SSMP contains eleven (11) required elements:

1. Goals
2. Organization
3. Legal Authority
4. Operations and Maintenance Program
5. Design and Performance Provisions
6. Overflow Emergency Response Plan (OERP)
7. Fats, Oils, and Grease (FOG) Control Program
8. System Evaluation and Capacity Assurance Plan (SECAP)
9. Monitoring, Measurement and Program Modifications
10. SSMP Program Audit
11. Communications Program

The SECAP or Element 8 of the SSMP requires an update of the evaluation and capacity assurance plan which must include the identification of the means and methods used to assure that the collection system has the adequate hydraulic capacity to convey dry and peak wet weather flows through the system to the ultimate disposal points without upset or discharge to the environment or private property.

Considering the substantial changes to the VVWRA sewer collection system, and to satisfy the SECAP and the SSMP audit (Elements 8 & 10) requirements, VVWRA staff completed the following in 2018:

- Audit of the SSMP by Larry Walker and Associates (final report attached)
- The Interceptor Capacity Study by Dudek Engineering

The final step in this process is to perform the SSMP update. Once the SSMP update is finalized, VVWRA staff will submit it for Board approval and publish it on www.vvwra.com

FINANCIAL IMPACT

Finance Approval:

Fund 01 or 07		
Accounting Code (String) example: 01-xx-xxx-xxxx (project code if any)	01-02-505-8150-9999	
Transfer from Reserve	Y []	N [X]
If Transfer, from Which Reserve		
Outside Funding Source if applicable		
Change Order	Y []	N [x]
Original Budget Amount	\$19,000.00	
Revised Original Contract Amount	\$ 9100	
Budget Remaining after the Recommendation	\$0	
Contract after Change	\$0	

Fund 09		
Accounting Code (String) example: 09-xx-xxx-xxxx (<u>mandatory</u> project code)		
Transfer from Reserve	Y []	N []
If Transfer, from Which Reserve		
Outside Funding Source		
Change Order	Y []	N []
Original Budget Amount	\$	
Original Contract Amount	\$	
Budget Remaining after the Recommendation	\$	
Contract after Change	\$	

RELATED IMPACTS

- Properly manage, operate and maintain all portions of the VVWRA’s wastewater collection system
- Provide adequate capacity to convey peak wastewater flows
- Minimize the frequency of SSOs
- Mitigate impacts of SSOs that may occur
- Meet all notification and reporting requirements

March 23, 2018

Latif Laari
 Business Applications Manager
 Victor Valley Wastewater Reclamation Authority
 llaari@vwwra.com



Dear Mr. Laari:

Larry Walker Associates (LWA) is pleased to provide this scope of work to the Victor Valley Wastewater Reclamation Authority (VWVRA) to perform an internal audit and update of its existing Sewer System Management Plan (SSMP). LWA has the insight that comes from assisting many agencies around the State in developing and auditing their SSMP programs and complying with other requirements in the Sanitary Sewer System Waste Discharge Requirements (SSS WDR). The SSS WDR was issued by the State Water Resources Control Board (State Water Board) in 2006 as Order No. 2006-0003-DWQ. It has since been amended, most recently in 2013 by an update to the monitoring and reporting provisions (MRP) through Order WQ 2013-0058-EXEC.

For this project, LWA will conduct a review of the SSMP, prepare an internal audit report, and revise and update the SSMP based on the audit findings and in line with the latest requirements of the SSS WDR. The Scope of Work, Budget, and Schedule presented below describe the anticipated work effort.

SCOPE OF WORK

Task 1. SSMP Audit

Under this task, LWA will assist VWVRA in preparing an SSMP internal audit report. The VWVRA SSMP was last updated in 2012. Provision D.13(x) of the SSS WDR requires all collection system agencies perform an internal audit of their SSMP every two years, at a minimum.

For this task, LWA will review the current SSMP as well as information available on CIWQS Public Reports to understand the VWVRA program and its effectiveness at managing the collection system. LWA will work with VWVRA staff to assemble any information which may not be publicly available in CIWQS. Per Provision D.13(x) of the SSS WDR, the internal audit needs to evaluate the SSMP effectiveness (e.g., metrics such as miles of televised pipe, number of spills/volumes from year to year, etc.) and the agency's compliance status with each of the required SSMP elements. LWA will analyze, tabulate, and graph historical information on the program metrics and also evaluate the SSMP for compliance with all the required elements and WDR amendments.

LWA will prepare a draft audit report of the audit findings for VWVRA's staff review. The report will note deficiencies and opportunities for improving each element of the SSMP. The

audit report will be finalized following VVWRA's review. The final report is to be kept on file at the VVWRA offices; there is no need to submit it to regulatory agencies.

Task 2. SSMP Update

Under this task, LWA will assist VVWRA in updating the SSMP based on findings in the audit report noted under Task 1. Each element will be revised to reflect current practices and operating conditions and to bring it into compliance with the latest amendments to the SSS WDR. LWA will consult with VVWRA to ensure program information, practices and procedures presented in the SSMP are current. Current versions of the SSMP, technical studies, capital improvement plans, and other program-related documents will be reviewed and information will be incorporated into the SSMP as needed. This scope assumes that LWA will be provided an editable electronic version of the SSMP.

LWA will prepare a draft revised SSMP for VVWRA's staff review. Final updates will be finalized following VVWRA's review. To be in compliance with Provision D.14 of the SSS WDR, LWA recommends that the updated SSMP be certified by the VVWRA Board of Directors. Further, per requirement C.8.iv of the 2013 MRP, LWA recommends that VVWRA post the updated SSMP on its website and submit an electronic copy to the State Water Board within 30 days of completing the Board certification process.

Task 3. Project Management

Project status, budget, and invoicing will be covered under this task. In addition, general communication between LWA and VVWRA staff regarding the overall project is included in this task.

Under this task, the LWA Project Manager and Contract Administrator will ensure contract requirements are implemented, manage budgets and schedules, and prepare monthly invoices that summarize activities undertaken during the billing period. The Project Manager will review all technical reports and deliverables and communicate regularly with VVWRA staff to keep them apprised of progress and solicit input on project direction.

BUDGET AND SCHEDULE

The above tasks will be conducted by LWA on a time and materials basis for a cost not to exceed \$18,100. All tasks are budgeted based on our standard billing rates (attached). A cost breakdown by task is shown below.

Cost Breakdown by Task

Task	Estimated Cost
1. SSMP Audit	\$ 7,300
2. SSMP Update	\$ 9,100
3. Project Management	\$ 1,700
Total	\$ 18,100

The SSMP Audit will be completed within six weeks of receiving notice to proceed. The SSMP Update will be completed six weeks following Audit completion. The task schedule may be adjusted depending on availability of information needed for the project and based on consultation with VVWRA staff.

We look forward to continuing our work with VVWRA. Feel free to contact me at (408) 261-3996 or kristinec@lwa.com if you have any questions regarding this scope of work.

Sincerely,



Kristine Corneillie
Senior Engineer

Attachment: LWA Rate Schedule

LARRY WALKER ASSOCIATES

Rate Schedule Effective July 1, 2017 – June 30, 2018

PERSONNEL	Rate \$/Hour	REIMBURSABLE COSTS	
<i>Administrative</i>	\$ 85	Travel:	
<i>Contract Administrator</i>	\$150	Local mileage	Current IRS rate
<i>Project Staff I-C</i>	\$110	Transportation	Actual expense
<i>Project Staff I-B</i>	\$140	Auto rental	Actual commercial rate
<i>Project Staff I-A</i>	\$165	Fares	Actual expense
<i>Project Staff II-B</i>	\$175	Room	Actual expense
<i>Project Staff II-A</i>	\$195	Subsistence ⁽¹⁾	\$48 per day
<i>Senior Staff</i>	\$225	The rate for each meal as follows: ⁽¹⁾	
<i>Associate</i>	\$250	Breakfast	\$ 9
<i>Vice President</i>	\$275 - \$285	Lunch	\$13
<i>Senior Executive</i>	\$300	Dinner	\$21
<i>President</i>	\$300	Incidentals	\$ 5
		Report Reproduction and Copying:	
		Actual expense	
		Black and white copy, in-house	\$0.08
		Color copy, in-house	\$0.89
		Binding, in-house	\$1.95
		Special Postage and Express Mail:	
		Actual expense	
		Other Direct Costs:	
		Actual expense	
		Daily Equipment Rental Rates:	
		Single parameter meters & equipment	\$ 30
		Digital Flow Meter	\$ 60
		Multi-parameter field meters & sondes	\$100
		Dye/tracer mapping or residence time	\$200
		Multi-parameter continuous remote sensing	\$ 40
		Subcontractors:	
		Actual expense plus 10% fee	

Note: ⁽¹⁾ Charged when overnight lodging is required.

Revised 12/22/17

**Victor Valley Wastewater Reclamation Authority
Quotation Comparison**

Item	Description	Qty	Vendor #1			Vendor #2			Vendor #3		
			Name	Contact	Telephone	Name	Contact	Telephone	Name	Contact	Telephone
1	Sanitary Sewer Management Plan Revision	1	Larry Walker & Associates	Kristine Cornelie	4082613996	Dudek Engineering	Elizabeth Caliva	7608466184	Dexter Wilson Engineer	Natalie Frascetti	8585399081
			Per Unit	Total	+Tax +Frt	Per Unit	Total	+Tax +Frt	Per Unit	Total	+Tax +Frt
			18100	18100	N N	34120	34120	N N	35040	35040	N N
2											
3											
4											
5											
6											
7											

Plus Sales Tax 0.00
 Plus Shipping/Freight 0.00
Total 18100

0.00
 0.00
34120

0.00
 0.00
35040



VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY
Report/Recommendation to the Board of Commissioners

September 19, 2019

FROM: Brian Macy, Interim General Manager
TO: Board of Commissioners
SUBJECT: Grant of Easement to High Desert Solar, LLC

RECOMMENDATION

It is recommended that the Board of Commissioners authorize the Interim General Manager to sign the Grant of Easement document provided by High Desert Solar, LLC (aka HDSI, LLC)

REVIEW BY OTHERS

This recommendation was reviewed by Piero Dallarda, Legal Counsel.

BACKGROUND INFORMATION

VWRA staff have been negotiating with High Desert Solar for an easement to support their solar field project near VWRA property. High Desert Solar will be constructing and maintaining high voltage electric lines through VWRA property per the easement agreement attached (see attachment A). Norris Realty Advisors completed an appraisal (see attachment B) for High Desert Solar and determined the fair market value for the easement is \$105,000 which VWRA will receive as compensation for granting the easement.

FINANCIAL IMPACT

None

RELATED IMPACTS

The overhead electric lines will be placed over an existing San Bernardino Flood Control easement and VWRA ponds located south of the Regional Treatment Plant. Both San Bernardino Flood Control and VWRA have approved the alignment and aware of the safety issues associated with the overhead electric lines.

Attachment A

EASEMENT OPTION AGREEMENT

THIS EASEMENT OPTION AGREEMENT (“Agreement”) is entered into effective as of this ___ day of September, 2019 (“Effective Date”), by and between **Victor Valley Wastewater Reclamation Authority**, a municipal corporation formed under the laws of the State of California (“Grantor”), and **HDSI, LLC**, a Delaware limited liability company (“Grantee”).

WITNESSETH:

A. Grantor is owner of that certain property situate in San Bernardino County, California, as more particularly described in each **Exhibit A** attached hereto (the “Grantor Property”); and

B. Grantee plans to acquire or lease that certain property situate in San Bernardino County, California located on Helendale Road (the “Grantee Property”), upon which Grantee plans (but is not obligated) to develop certain power generation facilities (the “Power Plant”); and

C. In order to install the utilities necessary to transmit the power generated at the Power Plant, Grantee is desirous of receiving from Grantor, and Grantor is willing to grant to Grantee, an option to acquire an easement across the Grantor Property for the purpose of locating and operating certain Utility Facilities (below defined) thereon.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants, promises and conditions set forth herein, the Option Payment and other good and valuable consideration, the sufficiency and adequacy of which are hereby acknowledged by the parties hereto, it is hereby agreed as follows:

1. **Grant of Option.** Upon the terms set forth in this Agreement, Grantor hereby agrees to grant to Grantee the exclusive right and option (“Option”) to acquire a non-exclusive, irrevocable and perpetual easement in, under, over, across and through the Grantor Property (“Easement”). The parties presently anticipate that the Easement will consist of approximately 16.33 acres and be located as generally described in the each attached **Exhibit B**. However, the parties hereto acknowledge that the Easement shall be subject to realignment as set forth in Section 9, below.
2. **Escrow.** No later than five (5) business days after the Effective Date, Grantee shall open an escrow account (“Escrow”) and deposit an executed counterpart of this Agreement and the sum of TEN THOUSAND FIVE HUNDRED and No/100 Dollars (\$10,500.00) with Chicago Title Company (“**Escrow Agent**”) and this Agreement shall serve as instructions to the Escrow Agent for consummation of the transactions contemplated by this Agreement. Grantor and Grantee agree to execute such additional escrow instructions as may be appropriate to enable the Escrow Agent to comply with the terms of this Agreement; provided, however, that in the event of any conflict between the provisions of this Agreement and any

supplementary escrow instructions (other than joint escrow instructions), the terms of this Agreement shall control.

3. **Consideration for Option.** In consideration of the Option granted hereunder, the Escrow Agent shall cause the following payments (the "Option Payment") to be made to Grantor:

Ten Thousand Five Hundred and No/100 Dollars (\$10,500.00) no later than 15 days following the Effective Date.

The Option Payment is deemed fully earned by Grantor upon release and payment to Grantor from Escrow and will thereafter be non-refundable, irrespective of whether or not Grantee exercises the Option; provided, however, that the Option Payment shall be refundable to Grantee upon any termination of this Agreement as a result of any default of Grantor hereunder.

4. **Due Diligence.** As used herein, the "Due Diligence Period" shall mean the period of time commencing upon the Effective Date and extending until the earliest to occur of: (a) Closing, (b) termination of this Agreement pursuant to Section 14 below, and (c) expiration of 550 days from the Effective Date. During the Due Diligence Period Grantee shall be allowed to evaluate the suitability of the subject property for Grantee's intended purpose. Due diligence information shall include, but not be limited to, the following: physical inspection, survey, Environmental Site Assessments Phase I, and if requested Phase II, biological review, geotechnical review, cultural and historical inspection and testing including excavation, land use, zoning, lease review and other relevant investigations. The Phase I Environmental Site Assessment (ESA) shall be performed in accordance with ASTM Standards and any additional environmental investigation based on recommendations by said Phase I ESA. At no cost to Grantee, Grantor shall make all reasonable due diligence information available to Grantee within ten (10) business days from the Effective Date and will give Grantee or its representatives reasonable access to the Grantor Property for the purpose of conducting the due diligence activities described above and such other investigations and evaluations as it deems appropriate in its evaluation of the Grantor Property. Grantee hereby agrees to indemnify, defend and hold Grantor harmless from and against any and all claims, judgments, damages, losses, penalties, fines, demands, liabilities, encumbrances, liens, costs and expenses (including reasonable attorneys' fees, court costs and costs of appeal) for personal injury or property damage actually suffered or incurred by Grantor to the extent caused by Grantee or its authorized representatives during their investigation of, entry onto or inspections of the Grantor Property prior to the Closing. If this Agreement is terminated, Grantee shall repair the damage caused by Grantee's entry onto or inspections of the Grantor Property, provided the foregoing shall not require Grantee to repair or remediate any pre-existing conditions that are discovered by Grantee. Grantee and its inspectors, contractors, and vendors that access the Grantor Property, at no cost or expense to Grantor, shall provide evidence of (i) liability insurance covering personal injury and property damage in an amount of not less than

\$1,000,000 of combined single limit with Grantor named as an additional insured, and (ii) workers' compensation insurance as required by statute. Grantee will not allow any inspector, contractor or vendor to commence any work on the Grantor Property which creates a mechanics' lien or any other lien rights. Grantee shall restore any disruptions to the Grantor Property caused by Grantee, or any contractor or vendor working on behalf of Grantee, to the same condition it was prior to the exercise of its due diligence at the Grantor Property. Grantee will not allow any equipment, vehicles, supplies or other materials to be stored overnight at the Grantor Property during the Due Diligence Period, or any other period occurring prior to the close of escrow, without Grantor's written consent.

5. **Exercise of Option.** Grantee may exercise the Option by providing to Grantor and Escrow Agent written notice of Grantee's election to exercise the Option ("Notice of Exercise") delivered prior to the termination of the Due Diligence Period accompanied by the payment of the Easement Acquisition Payment to the Escrow Agent (described in Section 4 below) (the "Exercise of Option"). This Agreement will terminate and be of no further force and effect if Grantee fails to exercise the Option.

6. **Closing and Easement Acquisition Payment.** Subject to satisfaction of the closing conditions set forth herein, the closing of the grant of the Easement contemplated herein will occur no later than thirty (30) days following the Notice of Exercise (the "Closing"). Upon Closing, Escrow Agent shall pay to Grantor, in immediately available funds, an amount equal to ONE HUNDRED FIVE THOUSAND AND NO/100 Dollars minus the Option Payment paid to Grantor through such date of Closing ("Easement Acquisition Payment"). At or prior to Closing, Grantor will deliver to Escrow Agent such customary and reasonable closing documents necessary for the Title Company (as defined below) to issue the Title Policy and to effectuate the grant of the Easement.

7. **Closing Conditions.** The following conditions are precedent to Grantee's obligation proceed to Closing, acquire the Easement, and to cause the Easement Acquisition Payment to be paid to Grantor (collectively, the "Conditions Precedent").
 - a. Grantor shall have complied with all of its obligations under this Agreement.
 - b. All of Grantor's representations and warranties contained herein shall be true and correct in all material respects as of the Closing.
 - c. Chicago Title Company ("Title Company") shall be irrevocably and unconditionally committed to issue to Grantee an ALTA Standard Coverage Owner's Policy of Title Insurance insuring Grantee's interest in the Easement, subject only to the Permitted Exceptions (as defined below) ("Title Policy"). Grantor shall execute and deliver to the Title Company an owner's affidavit, in such form as reasonably acceptable to Grantor and

Title Company, if and to the extent necessary to cause Title Company to issue the Title Policy. As used herein, the term “Permitted Exceptions” shall mean, collectively: (i) the standard printed exceptions on an ALTA Standard Coverage Owner’s Policy of Title Insurance (6-17-06), and (ii) exceptions permitted pursuant to Section 12 below.

If any Conditions Precedent are not satisfied by the Closing, Grantee may elect by written notice to Grantor to terminate this Agreement. Upon such termination, Grantee shall have any further obligations hereunder. Grantee may, in its sole and absolute discretion, waive compliance of any of the Conditions Precedent by an instrument in writing.

8. **Use of Easement.**

- a. Subject to the Use Conditions (as defined below) the Easement may be used to construct, alter, access, maintain, inspect, repair, reconstruct, replace, add to and operate one or more electric transmission facilities or electric distribution and communication facilities, consisting of one or more circuits, together with wires, cables, fibers, poles, guys and anchors, conduits, pull boxes, vaults, fixtures, surface or pole—mounted transformers, switchgear and other appurtenances connected therewith, including any necessary access roads (hereinafter referred to as the “Utility Facilities”), across, upon, over, under, and through the Easement. Subject to Section 8(b) below, Grantee shall have the right to modify, at its sole cost and expense, Grantor’s improvements upon the Easement Area (as defined in Section 12(b) below) in order to comply with all applicable laws and regulations, including all safety regulations with respect to the design, construction and maintenance of electric distribution and transmission facilities.
- b. The “Use Conditions” means that (a) the Utility Facilities will be designed, constructed and maintained in accordance with all applicable laws and regulations, including all safety regulations with respect to the design, construction and maintenance of electric distribution and transmission facilities, and (b) it being recognized that Easement Area contains certain water retention and conveyance improvements used to perform Grantor’s mission as a wastewater utility, Grantee shall not use the Easement Area in any manner, nor construct, erect, or place any objects, buildings, structures, of a permanent nature on, under, or over the Easement Area that will unreasonably interfere with the Grantor’s use of the Easement Area, as set forth herein.
- c. At least thirty (30) days before doing any work to construct, materially alter, modify, or demolish any improvements in the Easement Area, Grantee shall give written notice of its plans to the Grantor who shall have the right to review and approve or reasonably modify the plans and to place reasonable restrictions on Grantee’s access, equipment, methods,

materials, and manpower related to accomplishing the work, in order to ensure it is done consistent with Grantor's use of the Easement Area.

- d. For so long as Grantee maintains facilities upon the easement, Grantee will maintain a commercial general liability insurance policy naming Grantor as an additional insured and subject to limits established by Grantee in its commercially reasonable discretion. Until this Agreement is terminated and Grantee no longer maintains facilities on the Easement, Grantee, at no cost or expense to Grantor, shall provide evidence of (i) liability insurance covering personal injury and property damage in an amount of not less than \$1,000,000 of combined single limit and a policy of excess liability insurance in an amount not less than \$20,000,000, with Grantor named as an additional insured in each case, and (ii) workers' compensation insurance as required by statute.
- e. Upon the Grantee's abandonment, or termination of the Easement, Grantee will remove all of its facilities including but not limited to towers, poles, transmission wires, guy wires and anchors, as well as any other Grantee property from the Easement Area and restore the Easement Area at Grantee's sole expense to substantially the same condition that existed immediately before the grant.

9. **Realignment of Easement.** Grantor hereby acknowledges that the Easement as described in **Exhibit C** is an estimate of the alignment of the Easement only. Prior to the Exercise of the Option, the Easement will be marked and surveyed by Grantee's consultants. Grantor acknowledges that the Easement may be realigned in Grantee's reasonable discretion for any of the following reasons: (a) as a result of any potential archeological or culturally significant sites which are discovered in the Easement; (b) as a result of the existence of any threatened or endangered species in the Easement; (c) in the event any local, state or federal agency exercising jurisdiction over the Easement requires realignment of the Easement; (d) in the event the Easement is required to be realigned in order to be contiguous with Grantee's utility easements existing on adjoining properties; or (e) Grantee's consultants, in their reasonable discretion, determine there exists a technical need to change the alignment of the Easement. In the event Grantee desires to realign the Easement prior to the Exercise of Option due to any of the items (a) through (e) above, Grantee may relocate the Easement to another portion of Grantor's Property, with notice to Grantor, but without the necessity of obtaining Grantor's consent. The final Easement acreage and location will be as established by Grantee, subject to approval by all applicable local, state and federal agencies having jurisdiction over the Easement. Any realignment that materially changes the size, scope, or location of the Easement will require Grantor's written consent, which may be withheld at Grantor's reasonable discretion. For the purposes hereof, a material change means a change of greater than 5% in the size of the easement, or the relocation of the easement by more than 50 feet from estimate described on Exhibit C.

10. **Temporary Easement and Memorandum of Option.** On the Effective Date, Grantor shall execute and deliver to Grantee a temporary easement in the form of that document attached hereto as **Exhibit C** (the “Temporary Easement”) and a Memorandum of Option to Acquire Easement in the form of that document attached hereto as **Exhibit D**. Both the Temporary Easement and Option to Acquire Easement may be recorded at the option of Grantee, at Grantee’s sole cost and expense.
11. **Easement.** Upon Grantee’s Exercise of Option and Grantee’s compliance with all of the other terms of this Agreement, at the Closing a Utility Easement in the form of that document attached hereto as **Exhibit E** shall be executed promptly by the parties hereto and recorded in the Office of Recorder, San Bernardino County, California (“Utility Easement”).
12. **Title Matters.**
- a. Grantor represents and warrants that it is the fee owner of Grantor’s Property, and subject to any applicable law or regulation and any encumbrances, liens, covenants, conditions, reservations and restrictions and other matters of record pertaining to or effecting Grantor’s Property, Grantor has the right and authority to enter into this Agreement and to grant the Utility Easement as set forth in this Agreement and the attached exhibits. Grantor shall convey to Grantee the Easement by execution and delivery of the Utility Easement, subject to no exceptions other than the following (collectively, the “Permitted Exceptions”):
 - (1) The lien for real estate taxes and assessments not yet delinquent; and
 - (2) Such other exceptions as may be approved or deemed approved by Grantee pursuant to Section 12(b) through 12(d) hereof.
 - b. Grantee shall have reviewed and approved, within the time period and in the manner provided below, a preliminary title report (“PTR”) covering that portion of the Grantor Property comprising the Easement (the “Easement Area”), including copies of all documents referred to in the PTR.
 - c. On or before that date which is three hundred sixty (360) days after the Effective Date (the “Title Notice Date”) Grantee shall review the PTR, including copies of all documents referred to in the PTR, and shall notify Grantor in writing (“Title Notice”) which exceptions to title shown in the PTR and matters disclosed by a survey of the Easement Area (“Survey”) are not accepted by Grantee (collectively, the “Disapproved Title Matters”); all other matters and exceptions to title shown in the PTR and conditions disclosed by a Survey shall be deemed approved by Grantee. If Grantee fails to notify Grantor within the required time period of any

Disapproved Title Matters, Grantee shall be deemed to have approved the condition of the Easement as to such title matters. If Grantee notifies Grantor of any Disapproved Title Matters, Grantor shall have until 5:00 p.m., Pacific time, on the tenth (10th) day after Grantor's receipt of the Title Notice to notify Grantee in writing that:

- (i) Grantor shall use its reasonable efforts to either (A) cause any Disapproved Title Matters to be removed prior to the execution and delivery of the Utility Easement by Grantor, or (B) obtain, at Grantor's expense, an endorsement or other curative effect acceptable to Grantee in Grantee's sole and absolute discretion; or
 - (ii) Grantor elects not to cause any such Disapproved Title Matters to be removed.
- d. If Grantor gives Grantee notice under subsection (c)(ii) above, or if Grantor gives notice under subsection (c)(i) above, but later provides notice to Grantee that Grantor has been unable to cure or remove the applicable Disapproved Title Matter, then Grantee shall have until 5:00 p.m., Pacific time, on the fifth (5th) Business Day after Grantee's receipt of either such notice to notify that (i) Grantee revokes its disapproval of such exception(s) and will proceed with the transaction without any reduction in the Purchase Price and take title to the Easement subject to such exception(s), or (ii) Grantee will terminate this Agreement and Grantor shall refund to Grantee the amount of the Option Payment within three (3) days of the receipt of notice of such termination.

13. **Representations and Warranties.** Grantor represents and warrants to Grantee as follows, all of which shall be true and accurate as of the Effective Date a through the execution and delivery of the grant of the Easement to Grantee:

- a. This Agreement and all documents executed by Grantor that are to be delivered to Grantee pursuant to this Agreement are, or at the time of delivery will be, duly authorized, executed and delivered by Grantor; and
- b. This Agreement and all documents executed by Grantor that are to be delivered to Grantee are, or at the time of delivery will be, legal, valid and binding obligations of Grantor, and do not, and at the time of delivery will not, violate any provisions of any agreement or judicial order to which Grantor is a party or to which Grantor or the Easement is subject.
- c. Grantor has good and marketable title to the Easement.
- d. All of the Easement Area, and the existing uses of the Easement Area, are in compliance with all applicable laws, ordinances, rules, regulations, and requirements of all governmental authorities having jurisdiction thereof.

- e. There is no action, suit, proceeding or investigation pending, nor to Grantor's knowledge threatened, before any agency, court, or other governmental authority which relates to the Grantor or the ownership, maintenance, or operation of the Easement Area.
 - f. There is no condemnation or eminent domain proceeding affecting the Easement Area or any portion thereof currently pending nor, to Grantor's knowledge, is any such proceeding threatened.
 - g. Grantor has received no notice of any default or breach by the Grantor under any covenants, conditions, restrictions, rights-of-way, or easements which may affect the Grantor in respect to the Easement or may affect the Easement Area or any portion thereof, and no such default or breach now exists.
 - h. Grantor knows of no facts nor has Grantor failed to disclose to Grantee any fact which would materially interfere with the right and/or ability of Grantee to use and enjoy the Easement for the purposes set forth or contemplated herein.
 - i. Grantor has no knowledge of any hazardous substances that exist on the Grantor Property.
 - j. Grantor has not granted any right of possession or use of the Grantor Property and has no knowledge that anyone will, at the Closing, have any right of possession of the Grantor Property. A right of possession will include all leases and right both at the surface and below the surface.
 - k. Grantor has not caused any unsatisfied mechanics or materialmen's liens concerning the Grantor Property and has no knowledge of any unsatisfied mechanics or materialmen's lien rights concerning the Grantor Property created by others.
14. **Termination of Option.** Grantee may terminate this Agreement for any reason prior to the Closing by providing written notice thereof to Grantor. Following such termination, Grantor will retain the Option Payment released from Escrow and paid to Grantor, the Escrow Agent shall pay to Grantee any remaining balance in Escrow, and neither party will have any obligations to each other. Upon termination of this Agreement for any reason, Grantee shall immediately execute and record a withdrawal or release of memorandum of option in a form satisfactory to Grantor and Grantor's title company to remove such memorandum from being notice of any existing interest in land in the public records.
15. **Costs and Expenses.** Grantor and Grantee shall each be responsible for one-half of the fees of the Escrow Agent. Grantor shall be responsible for the cost of curing or subordinating any encumbrances as contemplated by Section 12. Grantee shall be responsible for the cost of the Title Policy, any transfer taxes, and the brokerage commission payable to the Kursch Group. Any property taxes

and assessments shall be prorated between the parties as of the Closing. Grantor shall have no duty to cure or subordinate any encumbrance that is presently unknown to Grantor or which attaches in the future (other than any such lien that attaches through a grant by Grantor or the failure to pay taxes or other obligations arising from ownership of the Grantor Property), which exceeds \$25,000.

16. **General Terms.**

- a. This Agreement shall be governed by, enforced and interpreted in accordance with the laws of the State of California.
- b. This Agreement contains the entire agreement of the parties with respect to the subject matter hereof, and supersedes any and all prior or contemporaneous understandings, agreements or communications, whether written or oral. This Agreement may not be amended in any respect except by a writing duly executed by the party to be charged thereby.
- c. This Agreement may be executed in counterparts, all of which executed originals together shall constitute one and the same Agreement.
- d. In the event any action, suit or proceeding, including arbitration, is commenced by a party hereto against the other arising out of or related to this Agreement, the prevailing party shall be entitled to recover from the non-prevailing party, in addition to any other amounts or relief to which it is entitled, the prevailing party's reasonable attorney fees and costs and including the arbitrator's or hearing officer's fees in connection with such action and/or arbitration and the preparation therefor.
- e. The parties shall execute all documents and take all actions as may be requested by the other party and which are reasonably necessary or appropriate to accomplish the purposes and intents of this Agreement.
- f. Any notice, communication or delivery, permitted, contemplated or required pursuant to this Agreement shall be provided in writing to the party at their address listed below by (i) personal delivery, (ii) certified mail returned receipt requested, postage prepaid, or (iii) by noticeably recognized overnight carrier (e.g. Federal Express, UPS etc.). Such notice shall be effective upon delivery, if by personal delivery or by overnight carriers, and three days following mailing, if mailed.

Grantor Address: Victor Valley Wastewater Reclamation Authority
 20111 Shay Road
 Victorville, CA 92394
 Attention: _____
 Email: _____

Grantee Address: HDSI, LLC
200 West Madison, Suite 3810
Chicago, Illinois 60607
Attention: Dennis Corn
Email: dcorn@mrpgenco.com

With a Copy to: Bryan Cave Leighton Paisner
1200 Main Street, Suite 3800
Kansas City, Missouri 64105
Attention: Joe Dubinski
Facsimile: 816.885.3383
Email: jpdubinski@bclplaw.com

- g. Exhibits A through F are attached hereto and incorporated herein by this reference as though set forth in full.

[remainder of page intentionally left blank]

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the dates set forth below with their respective signatures.

GRANTOR

GRANTEE

**VICTOR VALLEY WASTEWATER
RECLAMATION AUTHORITY**

HDSI, LLC

By: _____

By: _____

Its:

Its:

Date: _____

Date: _____

**EXHIBITS A AND B
to Easement Option Agreement**

[ATTACHED]

EXHIBIT C
to Easement Option Agreement

Form of Temporary Easement

[See Attached]

RECORDING REQUESTED BY

WHEN RECORDED MAIL TO

Bryan Cave Leighton Paisner LLP
1200 Main Street, Suite 3800
Kansas City, Missouri 64105
Attention: Joe Dubinski

TEMPORARY EASEMENT

This Temporary Easement (“Easement”) is dated for identification purposes only as of the _____ day of September, 2019, by and between Victor Valley Wastewater Reclamation Authority, a municipal corporation formed under the laws of the State of California, and HDSI, LLC, a Delaware limited liability company (“Grantee”, and together with Grantor, the “Parties”), with respect to the following facts, and is as follows:

RECITALS:

A. Grantor is the owner of that certain parcel of real property situate in San Bernardino, California, and described more particularly in **Exhibit A** attached hereto and incorporated herein by this reference (the “Grantor Property”).

B. Grantee is the Lessee of that certain property situate in San Bernardino, California, as more particularly described in **Exhibit B** attached hereto (the “Grantee Property”).

C. Grantor and Grantee have executed that certain Easement Option Agreement dated effective as of the date hereof (“Option Agreement”), whereby Grantor has granted to Grantee the option (“Option”) to purchase an easement through the Grantor Property.

D. In order to survey and mark the easement which is the subject of the Option Agreement (the “Permanent Easement”), and assess the feasibility thereof, Grantee is desirous of receiving from Grantor, and Grantor is willing to grant to Grantee, a temporary easement over, under, through, across and above Grantor’s Property for the purposes set forth herein.

NOW, THEREFORE, in consideration of the Option Agreement and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by each party hereto, the Grantor and Grantee hereby agree as follows:

1. Grant of Temporary Easement. Grantor hereby grants to Grantee, a temporary, non-exclusive easement over, under, through, across and above the Grantor Property (“Temporary Easement”) for the purpose of: (a) surveying and marking the Permanent Easement and determining the feasibility of the alignment of such Permanent Easement, and (b) conducting such tests and inspections as Grantee determines necessary, including without limitation, physical inspection, survey, Environmental Site Assessments Phase I and Phase II, biological review, geotechnical review, cultural and historical inspection and testing including any desired excavation, land use, zoning, lease review and other relevant investigations. In the event the alignment of the Permanent Easement is subject to adjustment as provided in the Option Agreement, the Temporary Easement may be utilized also to locate alternate alignments for the Permanent Easement, and to survey and mark the same. The Temporary Easement shall terminate immediately, without any further action by either party hereto, upon the earlier to occur of (i) the recordation of the document granting the Permanent Easement to Grantee or (ii) recordation of a document executed by Grantee relinquishing Grantee’s interest in and under the Option.

2. Easement Appurtenant. The Temporary Easement is hereby deemed appurtenant to the Grantee Property and is for the use and benefit of the Grantee Property. Grantor shall be entitled to use of the Temporary Easement Area so long as such use does not materially or unreasonably interfere with Grantee’s use and enjoyment of the Temporary Easement for the purposes set forth herein.

3. Attorneys’ Fees. In the event any legal action, suit or proceeding, including but not limited to, arbitration, is commenced by either party hereto for the interpretation or enforcement of this Agreement, the prevailing party in such proceeding shall be entitled, in addition to whatever other relief is afforded such party in such proceeding, to an award of such party’s reasonable attorneys’ fees and costs incurred in connection with such proceeding.

[Signatures and acknowledgments appear on following pages.]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date set forth with their respective signatures, to be effective as of the date first above set forth.

“GRANTOR”

VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY

By: _____ **Dated:** _____

Its:

“GRANTEE”

HDSI, LLC

By: _____

Its: _____ **Dated:** _____

EXHIBIT A
to Temporary Easement

Grantor Property

[TO BE INSERTED]

EXHIBIT B
to Temporary Easement

Grantee Property

[TO BE INSERTED]

[

EXHIBIT D
to Easement Option Agreement

Form of Memorandum of Option to Acquire Easement

[See Attached]

RECORDING REQUESTED BY

WHEN RECORDED MAIL TO

Bryan Cave Leighton Paisner LLP
 1200 Main Street, Suite 3800
 Kansas City, Missouri 64105
 Attention: Joe Dubinski

**MEMORANDUM OF
 OPTION TO ACQUIRE EASEMENT**

This Memorandum is made this ___ day of September, 2019, by and between HDSI, LLC, a Delaware limited liability company (“Optionee”), and [VWRA] (“Optionor”), for the purpose of affording notice that Optionor and Optionee have entered into an Easement Option Agreement (the “Option”), dated effective as of the date hereof, all of which provisions are specifically made a part hereof as fully and completely as if set out in full herein, wherein Optionor has granted, and does hereby grant, Optionee an exclusive right to purchase a non-exclusive, irrevocable and perpetual easement in, under, across, over and through Optionor’s real property situate in the San Bernardino County, California which real property is more particularly described in **Exhibit A** attached hereto and incorporated herein by this reference, on the terms and conditions stated in such Option. The Option period shall commence on the ___ day of September, 2019, and shall terminate on the date set forth in the Option.

IN WITNESS WHEREOF, the parties have executed this Memorandum the day and year first above written.

“Optionee”
HDSI, LLC

“Optionor”
[VWRA]

By: _____

By: _____

Its:

Its:

EXHIBIT A
to Memorandum of Option to Acquire Easement

Legal Description of Optionor's Real Property

[TO BE INSERTED]

EXHIBIT E
to Easement Option Agreement

Utility Easement

[See Attached]

RECORDING REQUESTED BY

WHEN RECORDED MAIL TO

GRANT OF UTILITY LINE EASEMENT

[VWRA], hereinafter called "Grantor", hereby grants to HDSI, LLC, a Delaware limited liability company, its successors and assigns, hereinafter called "Grantee", all those certain permanent and exclusive easements and rights of way to: (a) conduct such tests and inspections as Grantee determines necessary, including without limitation, physical inspection, survey, Environmental Site Assessments Phase I and Phase II, biological review, geotechnical review, cultural and historical inspection and testing including any desired excavation, land use, zoning, lease review and other relevant investigations, and (b) construct, use, maintain, alter, add to, enlarge, repair, replace, inspect, or remove, at any time and from time to time, electric lines, consisting of metal towers, wood or metal poles, "H" frame structures, guy wires and anchors, crossarms, wires and other fixtures and appliances and communication circuits with necessary appurtenances, both overhead and underground, for conveying electric energy to be used for light, heat, power, telephone or other purposes, in, under, on, over, along and across [[a][_____ ()] strip[s] of land, [each _____ () feet wide,]] hereinafter described and designated as "Right of Way Strip," lying within that certain real property of the Grantor, situated in the County of San Bernardino, State of California, described as follows:

[TO BE INSERTED]

The said Right of Way Strip is described on Exhibit A and more particularly shown on the Exhibit B, both attached hereto and by this reference made a part hereof.

Grantor further grants, bargains, sells and conveys unto the Grantee the right of assignment, in whole or in part, to others, without limitation, and the right to apportion or divide in whatever manner Grantee deems desirable, any one or more, or all, of the easements and rights, including but not limited to all rights of access and ingress and egress granted to the Grantee by this Grant of Utility Easement.

Grantor also hereby grants to Grantee, its successors and assigns, an easement to construct, use, maintain and repair an access road in, on, over, along and across a strip of land _____ (_____) feet wide, lying within that certain real property in said County and State, described as follows:

The said _____ feet wide strip is described as Strip 1 on the Exhibit A and more particularly shown on the Exhibit B, both attached hereto and by this reference made a part hereof.

Grantor hereby also grants to Grantee, its successors and assigns, and its and their contractors, agents, and employees, the right to clear and to keep clear said Right of Way Strip, free from explosives, buildings, equipment, brush, combustible material and any and all other obstructions of any kind (except for those herein provided) and the right to trim or remove any tree or shrub which in the opinion of Grantee, may endanger said electric lines or any part thereof or interfere with the exercise of the rights herein granted.

It is further understood and agreed that no other easement or easements shall be granted on, under or over said Right of Way Strip by Grantor to any person, firm or corporation without the previous written consent of Grantee.

Subject to the Use Conditions (as defined below) the Right of Way Strip may be used to construct, alter, access, maintain, inspect, repair, reconstruct, replace, add to and operate one or more electric transmission facilities or electric distribution and communication facilities, consisting of one or more circuits, together with wires, cables, fibers, poles, guys and anchors, conduits, pull boxes, vaults, fixtures, surface or pole-mounted transformers, switchgear and other appurtenances connected therewith, including any necessary access roads (hereinafter referred to as the "Utility Facilities"), across, upon, over, under, and through the Right of Way Strip. Grantee shall have the right to modify, at its sole cost and expense, Grantor's improvements upon the Right of Way Strip in order to comply with all applicable laws and regulations, including all safety regulations with respect to the design, construction and maintenance of electric distribution and transmission facilities.

The "Use Conditions" means that (a) the Utility Facilities will be designed, constructed and maintained in accordance with all applicable laws and regulations, including all safety regulations with respect to the design, construction and maintenance of electric distribution and transmission facilities, and (b) it being recognized that the Right of Way Strip contains certain water retention and conveyance improvements used to perform Grantee's mission as a wastewater utility, Grantee shall not use the Right of Way Strip in any manner, nor construct, erect, or place any objects, buildings, structures, of a permanent nature on, under, or over the Right of Way Strip that will unreasonably interfere with the Grantor's use of the Right of Way Strip, as set forth herein.

At least thirty (30) days before doing any work to construct, materially alter, modify, or demolish any improvements in the Right of Way Strip, Grantee shall give written notice of its plans to the Grantor who shall have the right to review and approve or reasonably modify the plans and to place reasonable restrictions on Grantee's access, equipment, methods, materials,

and manpower related to accomplishing the work, in order to ensure it is done consistent with Grantor's use of the Right of Way Strip.

For so long as Grantee maintains facilities upon the Right of Way Strip, Grantee will maintain a commercial general liability insurance policy naming Grantor as an additional insured and subject to limits established by Grantee in its commercially reasonable discretion. Until this Agreement is terminated and Grantee no longer maintains facilities on the Easement, Grantee, at no cost or expense to Grantor, shall provide evidence of (a) liability insurance covering personal injury and property damage in an amount of not less than \$1,000,000 of combined single limit and a policy of excess liability insurance in an amount not less than \$20,000,000, with Grantor named as an additional insured in each case, and (b) workers' compensation insurance as required by statute.

Upon the Grantee's abandonment, or termination of the Right of Way Strip, Grantee will remove all of its facilities including but not limited to towers, poles, transmission wires, guy wires and anchors, as well as any other Grantee property from the Right of Way Strip and restore the Right of Way Strip at Grantee's sole expense to substantially the same condition that existed immediately before the grant.

The terms, covenants and conditions of this Grant of Utility Easement shall bind and inure to the benefit of the successors and assigns of Grantor and the successors and assigns of Grantee.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed by its officers thereunto duly authorized, this ____ day of _____, 201__.

VICTOR VALLEY WASTEWATER
RECLAMATION AUTHORITY

By: _____

Name: _____

Title: _____

Exhibits A and B – Legal Descriptions and Easement Maps

EXHIBIT "A"

APN: 0468-061-01

LEGAL DESCRIPTION OF PARCEL: (41.05 ACRES)

THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 12, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO STATE OF CALIFORNIA.

LEGAL DESCRIPTION OF EASEMENT AREA: (0.33 ACRES)

THE SOUTH 120.00 FEET OF THE WEST 120.00 FEET OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 12, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO STATE OF CALIFORNIA.

EXHIBIT "B"



SCALE: 1"=300'

**APN: 0468-061-01
SE 1/4, NW 1/4, SEC
12, T6N, R5W, S.B.M.**



ORIGINAL PARCEL : 41.05 ACRES
EASEMENT AREA: 0.33 ACRES

EXHIBIT "A"

APN: 0468-061-10

LEGAL DESCRIPTION OF PARCEL: (40.60 ACRES)

THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 12, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

LEGAL DESCRIPTION OF EASEMENT AREA:(3.70 ACRES)

THAT PORTION OF THE SOUTHEAST 1/4 OF SECTION 12, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A STRIP OF LAND 120.00 FEET WIDE LYING 120.00 FEET EAST AND NORTHEAST OF THE FOLLOWING DESCRIBED LINE:

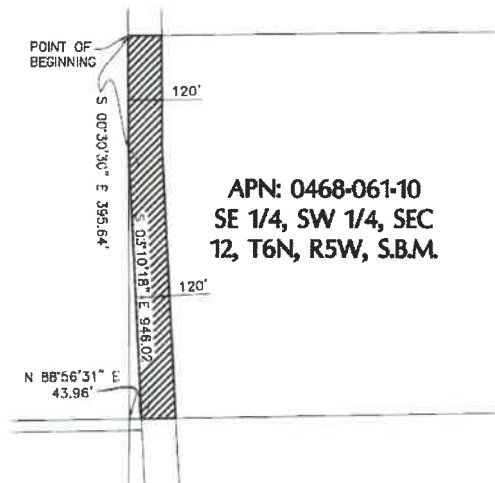
BEGINNING AT THE NORTHWEST CORNER OF SAID SOUTHEAST 1/4 THENCE SOUTH 00°30'30" EAST ALONG SAID THE WEST LINE OF SAID SOUTHEAST 1/4, THENCE LEAVING SAID WEST LINE SOUTH 03°10'18" EAST A DISTANCE OF 946.02 TO A POINT ON THE SOUTH LINE OF SAID SOUTHEAST 1/4, SAID POINT BEING NORTH 88°56'31" EAST 43.96 FEET FROM THE SOUTHWEST CORNER OF SAID SOUTHEAST 1/4.

THE SIDELINES OF SAID STRIP SHALL BE LENGTHENED OR SHORTENED TO TERMINATE ON THE NORTH AND SOUTH LINES OF SAID SOUTHEAST 1/4.

EXHIBIT "B"



SCALE: 1"=300'



ORIGINAL PARCEL : 40.60 ACRES
EASEMENT AREA: 3.70 ACRES

EXHIBIT "A"

APN: 0468-061-11

LEGAL DESCRIPTION OF PARCEL: (40.77 ACRES)

THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 12, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

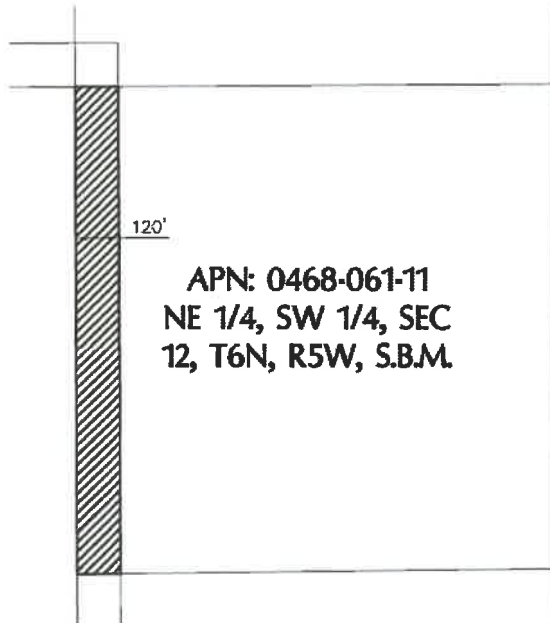
LEGAL DESCRIPTION OF EASEMENT AREA:(3.69 ACRES)

THE WEST 120.00 FEET OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 12, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

EXHIBIT "B"



SCALE: 1"=300'



ORIGINAL PARCEL - 40.77 ACRES
EASEMENT AREA: 3.69 ACRES

EXHIBIT "A"**APN: 0468-111-15**LEGAL DESCRIPTION OF PARCEL: (79.45 ACRES)

THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA,

EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF VICTORVILLE BY GRANT DEED RECORDED AUGUST 14, 2014 AS INSTRUMENT NO. 2014-0202025 OFFICIAL RECORDS.

LEGAL DESCRIPTION OF EASEMENT AREA:(7.40 ACRES)

THAT PORTION OF THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THE NORTH 40.00 FEET OF THE WEST 50.00 FEET,

TOGETHER WITH A STRIP OF LAND 120.00 FEET WIDE LYING 120.00 FEET EAST AND NORTHEAST OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT A POINT ON THE NORTH LINE OF SAID EAST 1/2, SAID POINT BEARING NORTH 88°56'31" EAST ALONG THE NORTH LINE A DISTANCE OF 43.96 FEET FROM THE NORTHWEST CORNER OF SAID EAST 1/2, THENCE SOUTH 03°10'16" EAST A DISTANCE OF 689.04 FEET, THENCE SOUTH 05°16'22" EAST A DISTANCE OF 968.31 FEET, THENCE SOUTH 07°25'08" EAST A DISTANCE OF 1012.24 FEET TO A POINT ON THE SOUTH LINE OF SAID EAST 1/2, SAID POINT BEARING NORTH 89°11'04" EAST ALONG THE SOUTH LINE OF SAID EAST 1/2 A DISTANCE OF 311.59 FEET FROM THE SOUTHWEST CORNER OF SAID EAST 1/2.

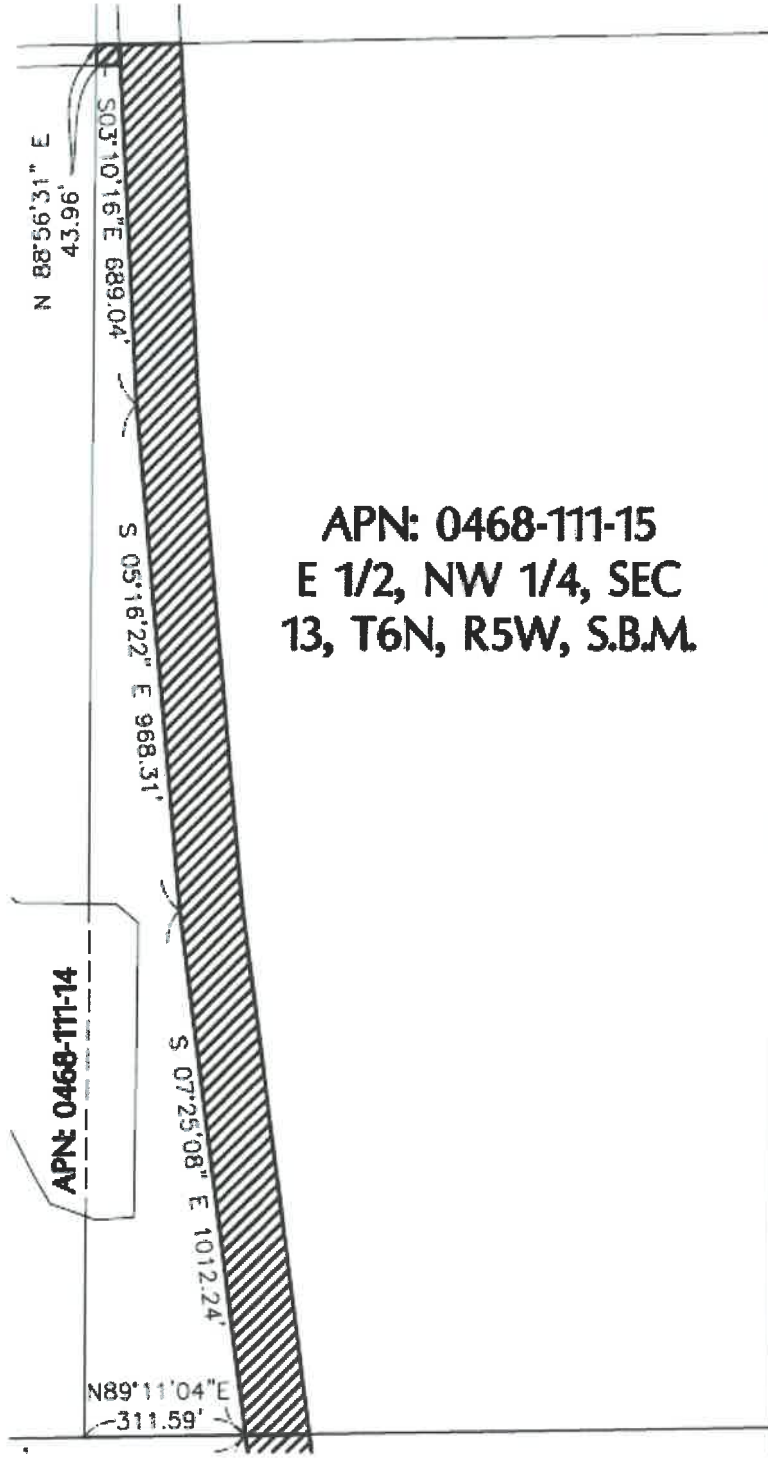
THE SIDELINES OF SAID STRIP SHALL BE LENGTHENED OR SHORTENED TO TERMINATE ON THE NORTH AND SOUTH LINES OF SAID EAST 1/2.

EXHIBIT "B"



SCALE: 1"=300'

APN: 0468-111-15
E 1/2, NW 1/4, SEC
13, T6N, R5W, S.B.M.



N 88°56'31" E
43.96'

S 03°10'16" E 689.04'

S 05°16'22" E 968.31'

APN: 0468-111-14

S 07°25'08" E 1012.24'

N 89°11'04" E
311.59'

ORIGINAL PARCEL : 79.45 ACRES
EASEMENT AREA: 7.40 ACRES

EXHIBIT "A"

APN: 0468-111-16

LEGAL DESCRIPTION OF PARCEL: (74.53 ACRES)

THE WEST 1/2 OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA,
EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF VICTORVILLE BY GRANT DEED RECORDED AUGUST 14, 2014 AS INSTRUMENT NO. 2014-0202025 OFFICIAL RECORDS.

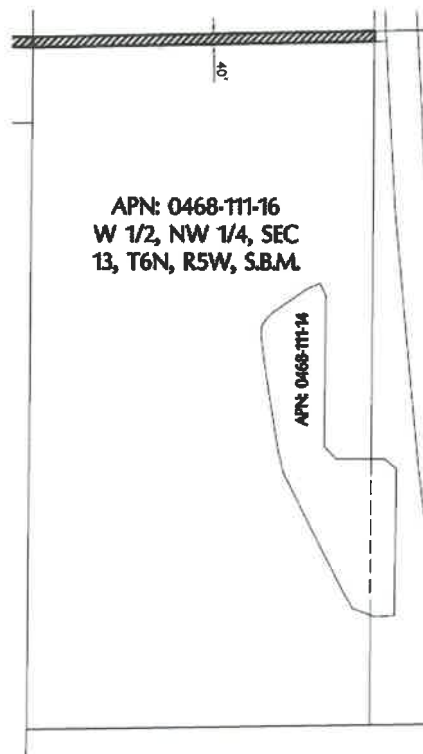
LEGAL DESCRIPTION OF EASEMENT AREA:(1.21 ACRES)

THE NORTH 40.00 FEET OF THE WEST 1/2 OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

EXHIBIT "B"



SCALE: 1"=400'



ORIGINAL PARCEL: 74.53 ACRES
EASEMENT AREA: 1.21 ACRES

Attachment B

MARKET VALUE APPRAISAL
16.33 ACRES OF EASEMENTS
WITHIN A LARGER PARCEL OF 276.40 ACRES
EAST OF HELENDALE ROAD, NORTH OF PERIMETER ROAD
VICTORVILLE, CA 92394
3630A - VVWWRA

PREPARED FOR
DENNIS CORN
HDSI, LLC
200 W. MADISON STREET, SUITE 3810
CHICAGO, ILLINOIS 60606

PREPARED BY
NORRIS REALTY ADVISORS
101 EAST GREEN STREET, SUITE 9
PASADENA, CALIFORNIA 91105

FEBRUARY 2019
FILE NO. 3630A

NORRIS REALTY ADVISORS
 REAL ESTATE APPRAISERS & CONSULTANTS
 101 EAST GREEN STREET, SUITE 9
 PASADENA, CA 91105

STEVEN R. NORRIS, MAI, CRE

TELEPHONE: (626) 405-9922
 FACSIMILE: (626) 405-0822

February 12, 2019

Dennis Corn
HDSI, LLC
 200 W. Madison Street, Suite 3810
 Chicago, IL 60606

Re: Market Value Appraisal
 16.33 Acres Of Easements Within A Larger Parcel Of 276.40 Acres
 East Of Helendale Road, North Of Perimeter Road
 Victorville, CA 92396
 Our File No. 3630A

Dear Mr. Corn:

In accordance with your request and authorization, we have appraised the above-referenced property and have formed an opinion of value. The subject easement has been appraised and consists of 16.33 acres of vacant land that are located within 276.40 acres of a larger parcel. The identified land is proposed to be utilized for power line easements related to the proposed High Desert Solar Power project.

The accompanying report, of which this letter is a part, describes in detail the site and method of appraisal; it contains the data considered in reaching our final value conclusion. The valuation analysis and conclusions have been prepared under the narrative appraisal report option of the Uniform Standards of Professional Appraisal Practice of the Appraisal Foundation.

Based upon a careful inspection of the subject environs and all discoverable factors that influence value, it is our conclusion that the Fair Market Value of the subject's property proposed easement area, as described in this report, according to the Assumptions and Limiting Conditions contained herein, based on conditions as of February 1, 2019 is:

ONE HUNDRED AND FIVE THOUSAND DOLLARS
(\$105,000)

We have also concluded an opinion of the fair market ground rent for the proposed easement, as presented herein. We appreciate the opportunity to be of service, and we look forward to future consultations at your request.

NORRIS REALTY ADVISORS



Steven R. Norris, MAI, CRE
 California Certification No. AG001677

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CERTIFICATION

The appraisers certify, to the best of their knowledge and belief, that:

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions and are our personal, impartial, and unbiased professional analyses, opinions and conclusions.
- The appraisers have no present or prospective interest in the property that is the subject of this report and no personal interest or bias with respect to the parties involved.
- The appraisers have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- Our engagement in this assignment was not contingent upon developing or reporting predetermined results.
- Our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- Receipt of the appraisal assignment was not based upon a requested minimum value, a specific value or approval of a loan.
- The appraisers' analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute, and the Uniform Standards of Professional Appraisal Practice (USPAP).
- The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
- As of the date of value, Steven R. Norris has completed the requirements of the continuing education program of the Appraisal Institute.
- Steve R. Norris inspected the subject property on September 21, 2018.
- Elizabeth D. Faulkner provided professional assistance to the person signing this report with respect to preliminary analysis, data collection, and report preparation.
- The appraiser(s) signing this report have not previously appraised the subject property in the period of three years immediately preceding acceptance of this assignment. The appraisers have not performed any appraisal service or other service in conjunction with this property within the past three years.
- Our firm's analyses, opinions and conclusions were developed and this report is intended to comply with the appraisal related mandates within Title XI of the federal Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA).
- The appraisers have extensive experience appraising properties similar to the subject.



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ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal is subject to the following assumptions and limiting conditions:

1. Title to the property is assumed to be good and marketable and the legal description correct.
2. No responsibility for legal matters is assumed. All existing liens, mortgages or other encumbrances have been disregarded and the property is appraised as though free and clear, under responsible ownership and competent management
3. All maps and exhibits in this report are intended to be visual aids and should not be construed as surveys or engineering reports.
4. All information in this report has been obtained from reliable sources. The appraisers cannot, however, guarantee or be responsible for the accuracy of information furnished by others.
5. This opinion of value applies to land and improvements only. Unless otherwise stated in this report, the value of trade fixtures, furnishings and other equipment has not been included with the value of the real estate.
6. Possession of this report or a copy thereof does not imply the right of publication or use for any purpose by any other than the addressee without the written consent of the appraisers.
7. Testimony or attendance in court or at any other hearing is not required by reason of rendering this appraisal, unless such arrangements are made a reasonable time in advance relative to such additional employment.
8. The distribution of the total valuation in this report between land and improvements applies only to the existing utilization. The separate valuations for land and building must not be used in conjunction with any other appraisal and are invalid if so used.
9. The land, and particularly the soil, of the area under appraisal appears firm and solid. Subsidence in the area is unknown or uncommon, but the appraisers do not warrant against this condition or occurrence.
10. Subsurface rights (minerals and oil) were not considered in making this appraisal.
11. Data relative to both land and improvement areas were obtained from sources considered to be reliable. We reserve the right to amend our value indications should further information regarding land or building dimensions be made available.
12. The comparable sales data relied upon in this appraisal are believed to be from reliable sources; however, it was not possible to inspect the comparables completely and it was necessary to rely on information furnished by other as to said data, therefore, the value conclusions are subject to the correctness and verification of said data.
13. Neither all nor any part of the contents of this report shall be conveyed to the public through advertising, public relations, news, sales or other media without the written consent and approval of the author, particularly as to valuation conclusions, the identity of the appraisers or firm with which they are connected or any reference to the Appraisal Institute.

14. We are generally aware that SCLA airport was a former military base, and may have issues related to the matters noted below. This is the full extent of our knowledge. Unless otherwise stated in this report, the existence of hazardous substances, including without limitation, asbestos, polychlorinated biphenyls, petroleum leakage, or agricultural chemicals, which may or may not be present on the property, or other environmental conditions, were not called to the attention of nor did the appraisers become aware of such during inspection. The appraisers have no knowledge of the existence of such materials on or in the property other than noted above. The appraisers are not qualified to test such substances or conditions. If the presence of such substances, such as asbestos, urea formaldehyde, foam insulation or other hazardous substances or environmental conditions may affect the value of the property, the value estimated is predicated on the assumption that there is no such condition on or in the property or in such proximity thereto that it would cause a loss in value. No responsibility is assumed for any such conditions, not for any expertise or engineering knowledge required to discover them. The client is urged to retain an expert in the field of environmental impacts upon real estate if so desired.
15. The appraisers are not considered experts with regard to compliance with the Americans with Disabilities Act (ADA) of 1990. Unless otherwise stated, no responsibility is assumed for any noncompliance with the provision of the ADA. The client is urged to retain an expert in the field of ADA assessment impacts upon real estate is so desired.

Special Assumptions

Our valuation assumes that there are no encroachments, easements, covenants or liens that would negatively impact the marketability of the subject site. We assume no liability for clear title to the subject and reserve the right to amend our opinion of value should more information be made available.

Land area measurements are based upon surveys and drawings noted herein. We reserve the right to amend our value estimates, should revised drawings be provided for our review.

Our estimate of the easement value is based upon a proposed easement rights description as provided by the client and set forth in the Addenda. We reserve the right to amend our value estimates, should we be provided with different language that describes these rights.

SUMMARY OF SALIENT FACTS

Client: HDSI, Inc.

Owner of Record: Victor Valley Waste Water Reclamation Authority

Property Location: East of Helendale Road

APNs: 0468-061-01, -10, -11; 0468-111-15, -16

Land Area: 16.33 acres of easements, 276.40 acres of a larger parcel

Zoning: AE, A-EB10, SP1-92 City of Victorville

Purpose and Intended Use of Appraisal: The purpose of this report is to estimate the As Is Fair Market Value and the Fair Market Land Rent of the proposed easement land. The intended user is HDSI, LLC. The intended use is to serve as an aid for internal decision-making.

Intended Users: HDSI, LLC. and the Victor Valley Wastewater Reclamation Agency (VWWRA)

Interest Appraised: Fee Simple Estate

Date of Value: February 1, 2019

Improvements: The subject property consists of vacant land.

Highest and Best Use: Development of a power access easement for a nearby solar power facility

VALUE CONCLUSIONS

<i>Proposed Power Line Easement - Value Summary</i>		
Part Take Calculations Summary:		
Area of Larger Parcel:	(Acres)	276.400
Est. Unit Value:	(Per Acre)	\$8,000
Estimated Land Value		\$2,211,200
Value Estimate of Larger Parcel (Rounded):		\$2,200,000
Easement (Proposed) Area:	(Acres)	16.3300
Estimated Unit Value:	(Per Acre)	\$8,000
Estimated Land Value - Easement		\$130,640
Overhead Powerline Easement Value (Rounded)	80.00%	\$105,000

Annual Fair Market Rent of Easement Land (Rounded)..... \$6,800

SUBJECT EASEMENT



**SUBJECT EASEMENT CONTINUED
(EASEMENT SHADED IN BLACK)**

EXHIBIT "B"



SCALE: 1"=300'

**APN: 0468-061-01
SE 1/4, NW 1/4, SEC
12, T6N, R5W, S.B.M.**



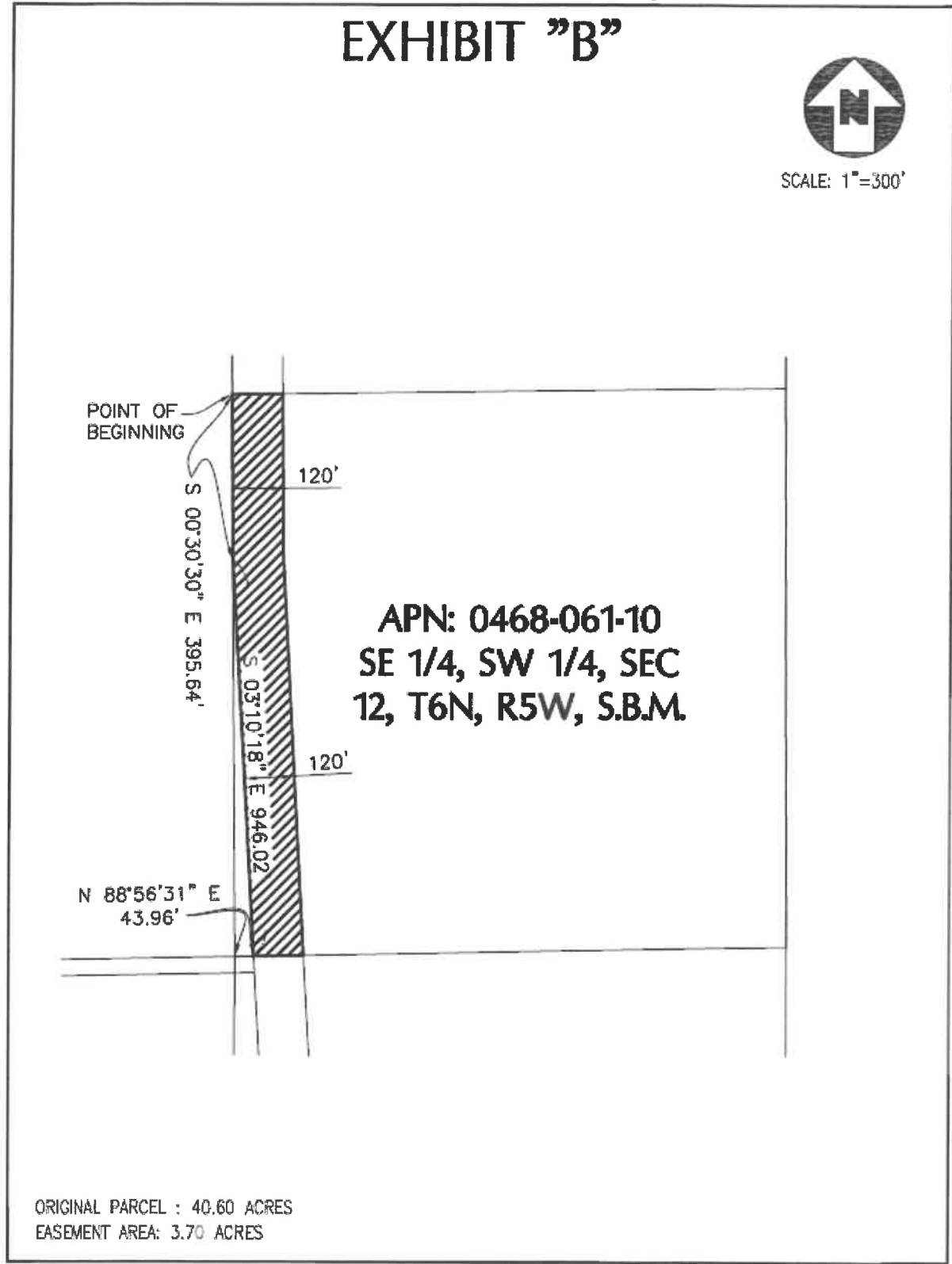
ORIGINAL PARCEL : 41.05 ACRES
EASEMENT AREA: 0.33 ACRES

**SUBJECT EASEMENT CONTINUED
(EASEMENT SHADED IN BLACK)**

EXHIBIT "B"



SCALE: 1"=300'

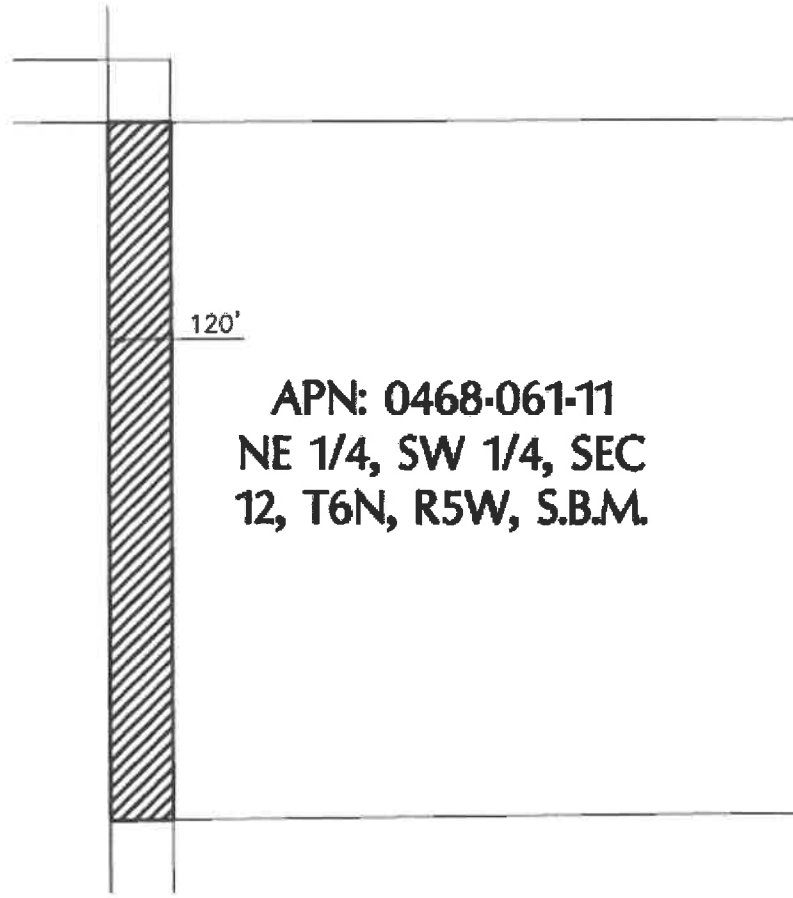


**SUBJECT EASEMENT CONTINUED
(EASEMENT SHADED IN BLACK)**

EXHIBIT "B"



SCALE: 1"=300'



**APN: 0468-061-11
NE 1/4, SW 1/4, SEC
12, T6N, R5W, S.B.M.**

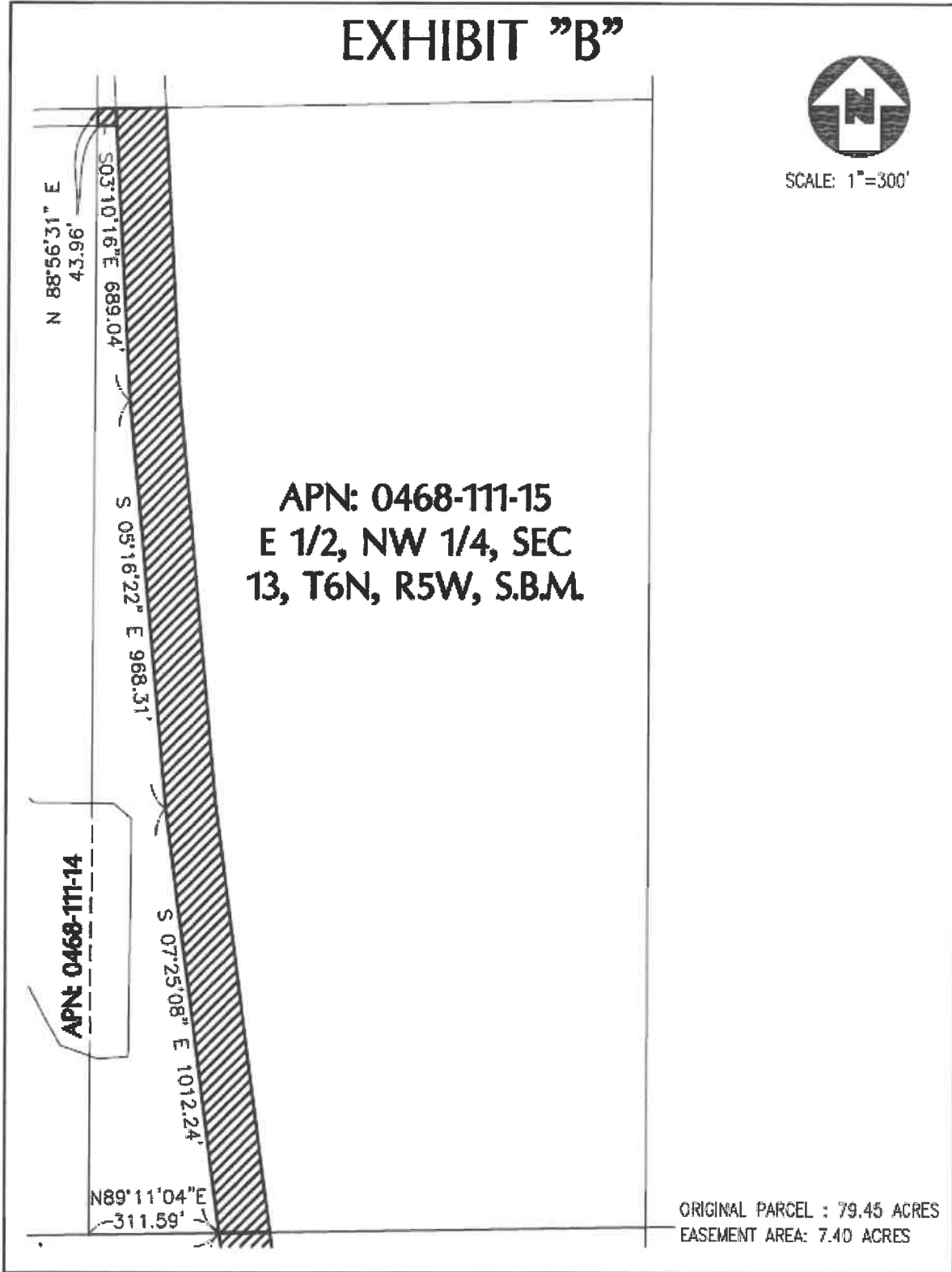
ORIGINAL PARCEL : 40.77 ACRES
EASEMENT AREA: 3.69 ACRES

**SUBJECT EASEMENT CONTINUED
(EASEMENT SHADED IN BLACK)**

EXHIBIT "B"



SCALE: 1"=300'

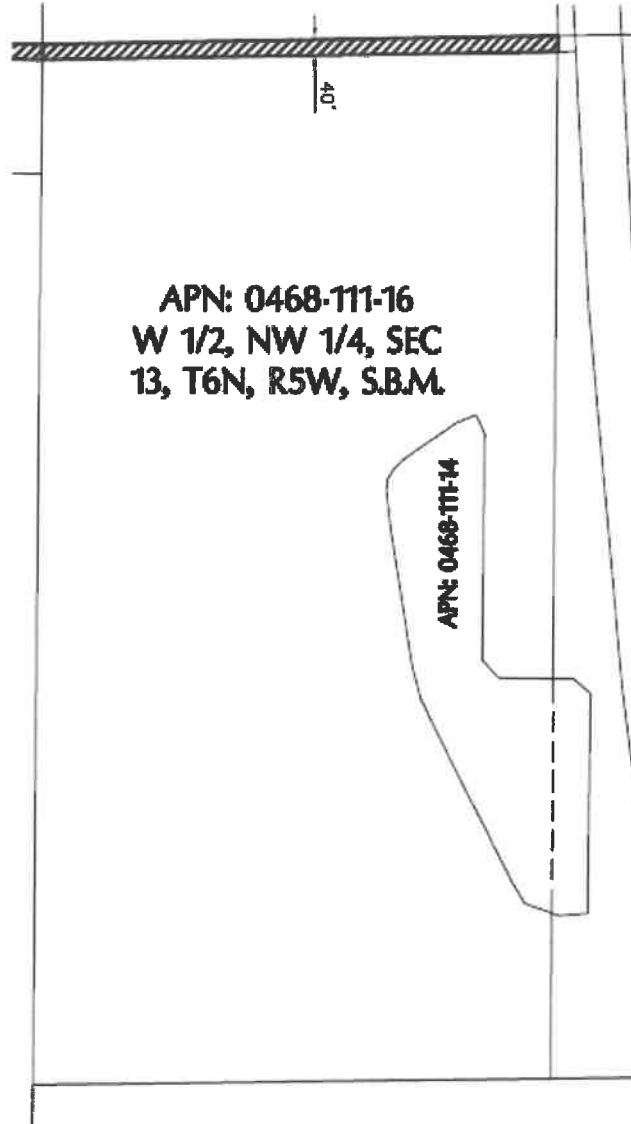


**SUBJECT EASEMENT CONTINUED
(EASEMENT SHADED IN BLACK)**

EXHIBIT "B"



SCALE: 1"=400'



ORIGINAL PARCEL: 74.53 ACRES
EASEMENT AREA: 1.21 ACRES

Subject Photos



Northerly portion of proposed right of way (hillside on right of photo), taken looking southerly



Central portion of right of way, taken looking northerly. VWWRA facility at right of photo.

Subject Photos (Cont'd)

South portion of the right of way, taken looking southerly.

INTRODUCTION

Identification of the Property

The subject property consists of a larger parcel of land consisting of 276.40 acres, located on the east side of Helendale Road, south of Colusa Road and east of the Southern California Logistics Airport (SCLA), in Victorville, California. According to mapping provided to us the by the client, the proposed easement component part of the larger subject site contains 16.33 acres. The site is more thoroughly described within the Site Description section of this report.

Legal Description

Detailed legal descriptions are contained in electronic records in our files.

Purpose of the Appraisal

The purpose of this appraisal is to formulate and express an opinion of the As Is Fair Market Value of the Fee Simple interest in the subject property, as well as the Fair Market land rent, as of the date of value stated herein.

Users of the Appraisal

The intended users of this report are HDSI, LLC. and the Victor Valley Wastewater Reclamation Agency (VVWRA).

Use of the Appraisal

This appraisal is being conducted in the context of internal decision-making purposes by the users of the report.

Definition of Fair Market Value

The term "fair market value," as used in this report, is defined as follows:

"The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of Title from seller to buyer under conditions whereby:

- a. Buyer and seller are typically motivated;
- b. Both parties are well informed or well advised, and acting in what they consider their own best interest;
- c. A reasonable time is allowed for exposure in the open market;
- d. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and,
- e. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale."

Source: Comptroller of Currency Insurance Regulation 563.17-1a(b)(2).

Market Rent

Fair Market Rent, also known as Market Rent, is defined as “The most probable rent that a property should bring in a competitive and open market reflecting the conditions and restrictions of a specified lease agreement, including the rental adjustment and revaluation, permitted uses, use restrictions, expense obligations, term, concessions, renewal and purchase options, and tenant improvements” .

Source: Appraisal Institute, *The Dictionary of Real Estate Appraisal*, 6th ed. (Chicago: Appraisal Institute, 2015).

Property Rights Appraised

The property rights valued consist of the Fee Simple Estate.

Definition of Fee Simple Interest

According to the Appraisal Institute, *Dictionary of Real Estate Appraisal*, 6th Edition, the term “fee simple interest,” as used in this report, is defined as, “*Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat.*”

Source: Appraisal Institute, *The Dictionary of Real Estate Appraisal*, 6th edition, page 90. (Chicago: Appraisal Institute, 2015).

Current Ownership

According to public records, the larger parcels are owned by Victor Valley Waste Water Reclamation Authority. To the best of our knowledge, the property is currently not listed for sale or subject to any purchase agreements. The property has not changed ownership within the past three years.

Date of Value

The date of value of this report is February 1, 2019.

Date of Inspection

Steven R. Norris inspected the subject property on September 21, 2018. The date of this report is stated in the Transmittal Letter.

Scope of the Appraisal

The scope of the appraisal encompasses the necessary research and analysis to prepare the report in accordance with the intended use, the *Standards of Professional Practice of the Appraisal Institute*, and the *Uniform Standards of Professional Appraisal Practice* of the Appraisal Foundation. Regarding the subject property, this involved the following steps:

1. Steven R. Norris personally inspected the subject property on September 21, 2018.
2. Regional and local information was based on our research of the area and data in the files of Norris Realty Advisors. Data on the market for commercial land in the area of the subject was obtained from our field research and conversations with numerous commercial real estate brokers, consultants and investors familiar with the subject property type.
3. Physical data pertaining to the subject was based on our personal inspection and information supplied to us by the owners and through public records.
4. In estimating the Highest and Best Use of the property, an analysis was made of data compiled in the steps noted above. In addition, our study of the commercial real estate marketplace was referenced in

order to determine the economic feasibility of the subject property in light of present development requirements.

5. In developing the approaches to value, data from the files of Norris Realty Advisors was referenced, as well as our research into the sales of other properties in the area. Commercial real estate consultants, leasing agents and brokers, and professionals familiar with the subject property type were also contacted.
6. After assembling the market data, final estimates of value were made.

REGIONAL AND AREA ECONOMIC OVERVIEW

The commercial real estate sector of the economy is influenced by factors that are global, national, and regional in nature. In order to understand the local conditions which affect the ever-changing value of individual assets, the larger economic forces which drive those conditions must be considered.

Developments in the Global and National Economy

The October 2018 International Monetary Fund's World Economic Outlook reports that the steady expansion since mid-2016 has continued into 2018. However, the expansion has become less balanced and may have peaked in some major economies. Global growth is projected at 3.7% for 2018 and 2019 and is set to soften over the medium term. Recent factors such as imposed tariffs on U.S. imports from China have dampened growth expectations for both the United States and a number of Asian economies. The IMF also suggests that U.S. growth will decline as fiscal stimulus begins to unwind in 2020, at a time when the monetary tightening cycle is expected to be at its peak.¹

While financial market conditions remain accommodative in advanced economies, they could tighten rapidly if, for example, trade tensions and policy uncertainty were to intensify. Moreover, the U.S. economy is above full employment, yet the path of interest rate increases that markets anticipate is less steep than that projected by the Federal Reserve. Unexpectedly high inflation readings in the United States could potentially lead investors to abruptly reassess risks. Tighter financial conditions in advanced economies could cause disruptive portfolio adjustments, sharp exchange rate movements, and further reductions in capital inflows to emerging markets.¹

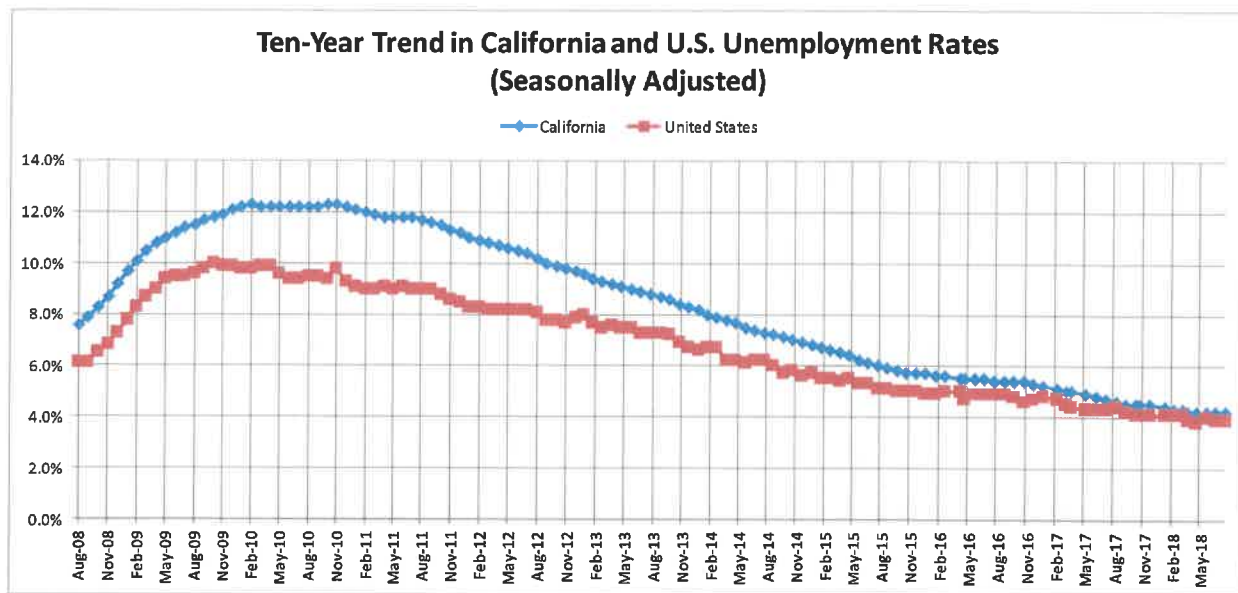
State of California

California is the most populous state in the nation, with roughly 39.5 million residents as of July 1, 2017 estimates. The U.S. Census Bureau reports that between the 2010 Census and July 2017, California's population increased by 6.1%.² According to the Los Angeles County Economic Development Corporation's 2018-2019 Economic Forecast & Industry Outlook report, California most likely will continue to outpace the nation in economic growth, now accounting for 14.1% of U.S. GDP. California's GDP is expected to expand by 2.6% in 2019 and real GDP growth in Los Angeles County is expected to be 2.2% for 2019.³

¹ <https://www.imf.org/en/Publications/WEO/Issues/2018/09/24/world-economic-outlook-october-2018>

² <https://www.census.gov/quickfacts/table/PST045216/06>

³ <https://laedc.org/wp-content/uploads/2018/02/LAEDC-2018-19-Economic-Forecast.pdf>



The chart above, created with data from the United States Bureau of Labor Statistics, provides a snapshot of ten-year trends in unemployment rates for California and the nation. This chart shows that California's unemployment rate has steadily declined over the past seven years from a high of 12.3% in October and November of 2010 to 4.2% in August 2018. This decline reflects a gradual recovery from the recession of 2008-2009 and does not suggest that the unemployment rate will continue to decrease as cyclical and unpredictable economic fluctuations are to be expected. Moreover, California's unemployment rates are still slightly higher than the nation-wide rates, but the state economy is considered to be fully employed at present.⁴

Commercial Real Estate Market

In the first half of 2018, nationwide commercial real estate transaction volume increased 11% year-over-year to \$122 billion. Deloitte's 2019 Commercial Real Estate Industry Outlook surveys 500 global investors who provide insights on factors influencing their commercial real estate investment decisions. Moving forward into 2019, nontraditional assets such as mixed-use properties and new business models such as properties with flexible leases and spaces are expected to attract an increased allocation of investment dollars. Additionally, survey respondents see significant impact from technology advancements on legacy properties. Fundamentally, commercial real estate companies should gain a thorough understanding of the changing usage pattern of the built space.⁵

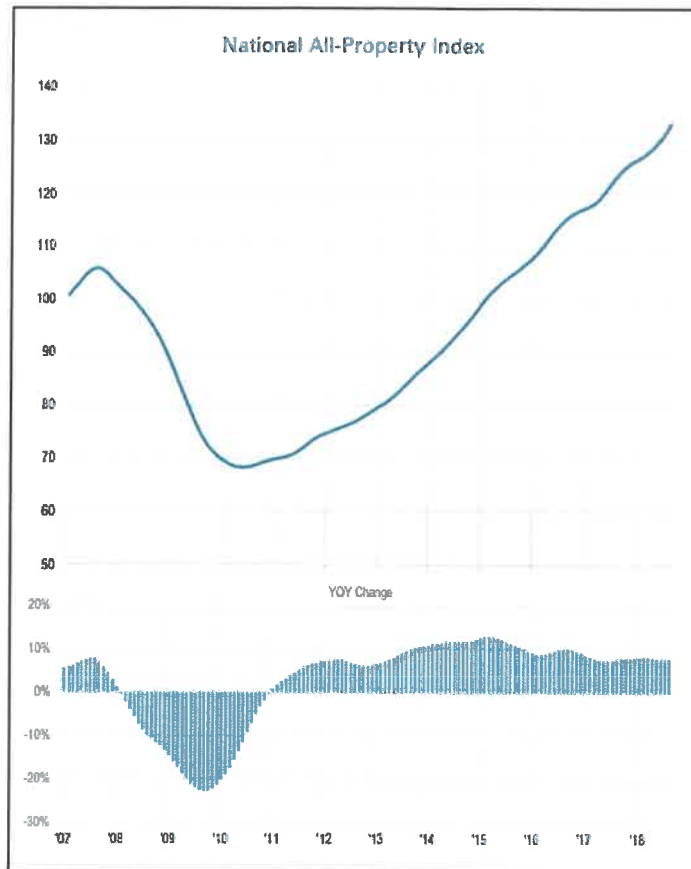
According to Deloitte, the real estate industry has been experiencing rapid changes in tenant dynamics, customer demographic shifts, and increasing needs for better and faster data access to allow improved service and amenities. The industry is preparing for smart cities and mobility. Mixed-use redevelopments are following the trend of integrating technology with real estate development, focusing on features such as heat mapping to track crowd size and energy usage, opt-in mobile apps to help collect data about users' health and activities, and energy savings using micro grids.⁵

⁴ <http://data.bls.gov/data/>

⁵ <https://www2.deloitte.com/us/en/pages/real-estate/articles/commercial-real-estate-industry-outlook.html>

The Moody's/RCA Commercial Property Price Index measures price changes in U.S. commercial real estate based on completed sales of the same commercial properties over time. The Moody's/RCA CPPI increased by 1.0% from July to August 2018 and gained 7.7% from August 2017 to August 2018. The pace of commercial property price increases accelerated in August after five months of slowed annual growth.

Apartment price growth continued to outpace other types, up 1.2% in August from a month earlier and 12.3% from one year prior. Suburban office prices grew 0.7% on the month and 9.1% year-over-year, having accelerated throughout the year. Central Business District office prices rose 0.7% from a month earlier and 1.7% from one year prior, although the annual pace of growth is the slowest among the property types. Industrial prices rose 0.3% from a month prior and 5.4% year-over-year.⁶ It should be noted with some caution that overall pricing has now well surpassed the pricing peak of 2007.



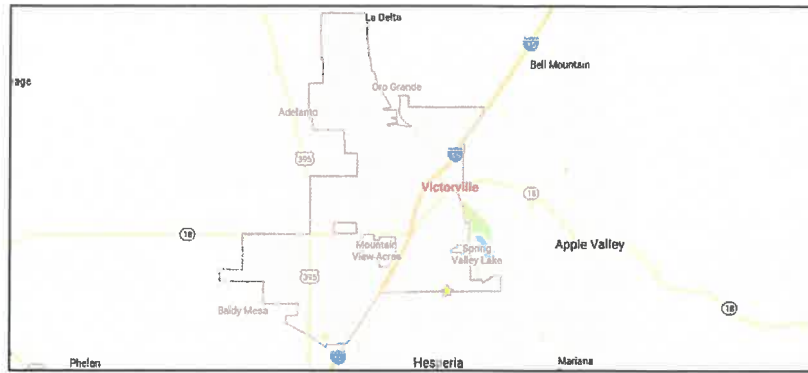
⁶ https://www.rcanalytics.com/our-data/rca_cpqi/

Subject Regional Map



Victorville, California

Victorville is situated approximately 97 miles Northeast of Los Angeles and 35 miles northeast of San Bernardino. The city is located at 2,875 feet above sea level, north of the San Bernardino Mountains, at the edge of the Mojave Desert. Interstate 15 and State Highway 18 intersect near the central portion of



the city and State Highway 395 borders Victorville on the west. Southern California Logistics Airport (SCLA) and is within Victorville's and the city is also close to Ontario International Airport.

The community of Victorville was incorporated on September 21, 1962 and located in the Victor Valley area. The Victor Valley also includes the communities of Adelanto, Apple Valley, Hesperia, Lucerne Valley, Oak Hills, Phelan, and Wrightwood. Victorville is the business hub of the area and draws consumers from well beyond its immediate area. It is the largest commercial center between San Bernardino and the Nevada border. The town was established as a result of the original railroad station constructed approximately one mile northwest of the narrows of the Mojave River. The abundance of good water and the availability of adequate bottomlands led to agricultural development shortly after the establishment of the railroad depot. Near the turn of the century, large deposits of limestone and granite were discovered. Since then the cement manufacturing industry has emerged as the single most important industry of the Victor Valley.

During World War II, on July 23, 1941 initial construction began of Victorville Army Airfield, later renamed George Air Force Base and now known as SCLA. The initial base facility was completed May 18, 1943. When fully activated, the base supported two Tactical Fighter Wings of the Tactical Air Command, whose primary aircraft was the F-4 Phantom. The base employed approximately 6,000 civilian and military personnel. On January 5, 1989, the Secretary of Defense announced the closure of George Air Force Base under the Base Closure and Realignment Act. The base was deactivated December 15, 1992. The former military base was annexed into the City of Victorville on July 21, 1993, and has been renamed Southern California Logistics Airport (SCLA).

Victorville Demographic Data

According to the City's Chamber of Commerce, as of 2017 the City's population was estimated to be 122,441, with a city area of 74.09 square miles. This community has experienced an expansion in the past decade due to inexpensive land and organized encouragement by government entities through tax breaks and other incentives to businesses in particular the subject area of discussion, the Southern California Logistics Airport (SCLA).

The City of Victorville is generally considered a bedroom community serving the Ontario (San Bernardino County) and San Gabriel Valley (Los Angeles County) employment centers. Although the number of wage and salary jobs in Victorville has increased considerably since 1990, the bulk of the

jobs in Victorville are in the Trade sector (accounting for 23% of jobs), followed by other jobs (13%), the Manufacturing sector (10%), and the Business/Personal/Entertainment sector (10%).

Most of the area's employment opportunities fall into service-related businesses, with nearly 42% of businesses in the city located in the retail sales category. Local manufacturing companies are primarily related to mining and cement production. However the SCLA project is expected to create an additional 13,149 directly related jobs according to SCLA officials. This is further discussed in Southern California Logistics Airport (SCLA) section of this report. Below is a list of the top ten employers in Victorville.

Victorville Top 10 Employers

SCLA - Includes all businesses	1,986
Victor Valley College	1,100
PrimeCare Med Grp./Desesrt Valley Hospital	900
Verizon	900
Victor Elementary School District	830
Federal Correction Complex	820
Victor Valley Union High School District	800
Walmart	600
City of Victorville	597
Victor Valley Community Hospital	544

The demographic information for the City of Victorville shares similarities with statistics for San Bernardino County, but also shows Victorville to have a population which is growing faster and contains households with lower incomes than the countywide statistics. In general, Victorville is considered an affordable blue- and white-collar residential community with more affordable home prices than Los Angeles or Orange Counties.

History of The Subject Property

After development of the High Desert Power Project (existing natural gas-fired power plant), which came on-line in 2003, Inland Energy developed a second electricity generation plant to be named Victorville 2 Hybrid Power Project, sometimes referred to as Victorville 2 or "VV2". Victorville 2 was designed to produce about 563 mega-watts (MW) using the combustion of natural gas for most of the production and solar thermal technology for a small portion of the production. Although most permits were either received or in process to be received, due to economic turndown in 2008, the Victorville 2 project was not constructed.

In 2016 Middle River Power ("MRP") acquired the existing High Desert Power Project. As part of MRP's plan to supply renewable energy to the City of Victorville and surrounding area, permitting work was started on a photovoltaic ("PV") solar plant that would use the same land as Victorville 2, but would not consume any natural gas and would produce a total of about 50MW peak.

The 2017 High Desert Solar Project proposed by MRP will be completely PV solar, with no requirement for the combustion of natural gas. Water use for the project will be extremely low, with only periodic water washing of the solar panels. About 190,000 solar panels will be arranged in rows with spacing between the rows for maintenance vehicles and periodic spray washing. PV panels use sunlight to

produce direct current (DC) power. Approximately 29 inverters, which convert DC electricity to useable AC power will be located throughout the array of solar panels. Inverters will be connected electrically and the resulting total output of the solar field will be raised to 230 kilo-volts (kV) to be transmitted to the existing High Desert Power Project, which is, in turn, connected to the Southern California Edison grid. The MRP High Desert Solar Project is in Pre-Application phase as of April 2017 and it is estimate the facility will be on-line by December 2019.

REGIONAL AND LOCAL INDUSTRIAL MARKET OVERVIEW

According to CoStar, the Inland Empire Industrial market ended the fourth quarter 2018 with a vacancy rate of 5.0%. The vacancy rate was up over the previous quarter, with net absorption totaling negative (950,656) square feet in the first quarter. Vacant sublease space increased in the quarter, ending the quarter at 2,366,671 square feet. Rental rates ended the first quarter at \$6.48, an increase over the previous quarter. A total of 24 buildings delivered to the market in the quarter totaling 3,487,220 square feet, with 26,963,584 square feet still under construction at the end of the quarter.

Approximately 10 years ago, GE Aircraft Engines moved its flight-testing operations and 54 jobs to Southern California Logistics Airport. The GEAE complex consists of a 161,700 square foot hangar which is designed to house a Boeing 747 testbed aircraft, as well as office space and a shop for engine work.

Additionally, the completion of the High Desert Power Plant, one of the first power plants built in California since the 1980's, has provided a new source of power for the region and the state. This plant provides close to 3% of the state's power requirement, producing 800 megawatts of power. The plant, built on SCLA land with SCLA financing, generates more than energy by providing tax revenues that SCLA can use in the establishment of future incentives to attract new businesses to the area, as well as for established businesses within the Victor Valley area. A second solar power plant (proposed subject), dubbed "Victorville Two" is presently in the land development and planning stages. The land for this plant is the subject of this report.

Southern California Logistics Airport (SCLA)

The Southern California Logistics Airport, formerly known as George Air Force Base, is situated northwest of the existing City limits, approximately four miles west of Interstate 15, adjacent east of U.S. Highway 395 and north of Air Express Road.

SCLA is operated by its' own private Board of Directors. George Air Force Base was one of the bases targeted in the first round of Federal military base closures, and was decommissioned in December 1992. In October 1994, the runways were opened to civilian air traffic. Businesses locating at SCLA are receiving tax breaks under the California's Local Military Base Recovery Act

Specializing in logistics and freight movement, SCLA is master planned for 43.5 million square feet of commercial space, making it one of the largest commercial developments in the Inland Empire. SCLA is a facility designed for international and domestic air cargo needs. SCLA provides air, ground and (proposed) rail transportation for "just-in-time" (JIT) delivery. The airport can accommodate all commercial and military aircraft with 24 hour a day tower operation and emergency response capabilities. SCLA has teamed with Stirling Properties to develop commercial build-to-suit sites for sale or lease. According to SCLA, the airport has attracted more than 100 companies with its direct access to global markets, favorable land prices and ready workforce.

In October 1998, Stirling Enterprises, Ltd, a Laguna Hills-based land developer revealed a plan to redevelop the former Base into an air cargo center. In December of 1998, the SCLA Authority entered into an agreement with Stirling to purchase the Economic Development Conveyance (EDC- those lands transferred from the Air Force to VVEDA) property, totaling approximately 1,921.64 acres.

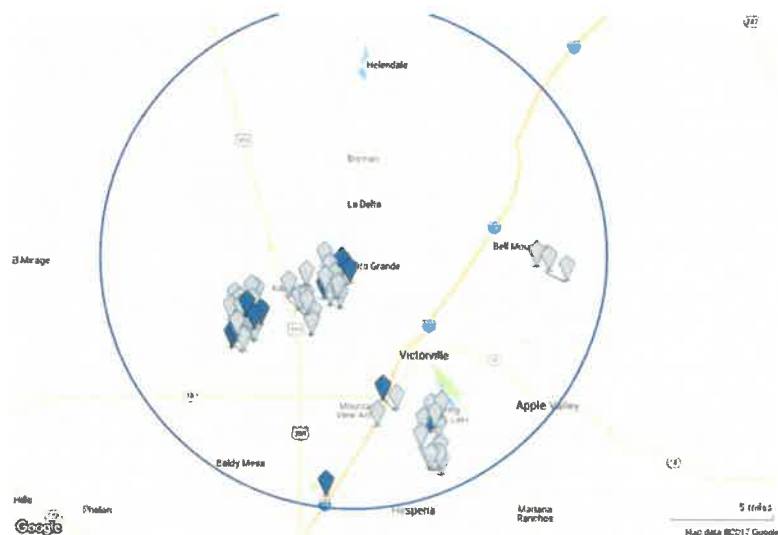
In the Master Agreement infrastructure costs are estimated by Stirling to approximately \$90 million (however, later documents provided by Stirling indicate a cost of approximately \$104 million) over a 20-year period. The Agreement proposes that the Airport Authority will fund approximately 57% of the infrastructure costs. Future development of the airport will focus on attracting air cargo operations, which include aviation and industrial park, an office park, and a hospitality area.

In February 2001, the Southern California Logistics Airport Authority (SCLAA) executed a Ground Lease and Development Agreement with the High Desert Power Trust (HDPT) to lease a portion of vacant land and to construct a 750-megawatt electric generating power plant. The ground lease term is scheduled for 50 years and generates \$75,000 in annual lease payments. The project began construction in April of 2001 and was completed in the spring of 2003.

Southern California Logistics Airport (SCLA) has attracted more than 100 companies with its direct access to global markets, competitively priced land and skilled and qualified workers. Companies currently located at SCLA include Boeing RAMS Team, Boeing Aircraft Service Company, Boeing Flight Test Operations, Nestle Waters North America, GE Aircraft Engines, High Desert Power Project, Southern California Aviation, Pratt & Whitney, and The Pasha Group.

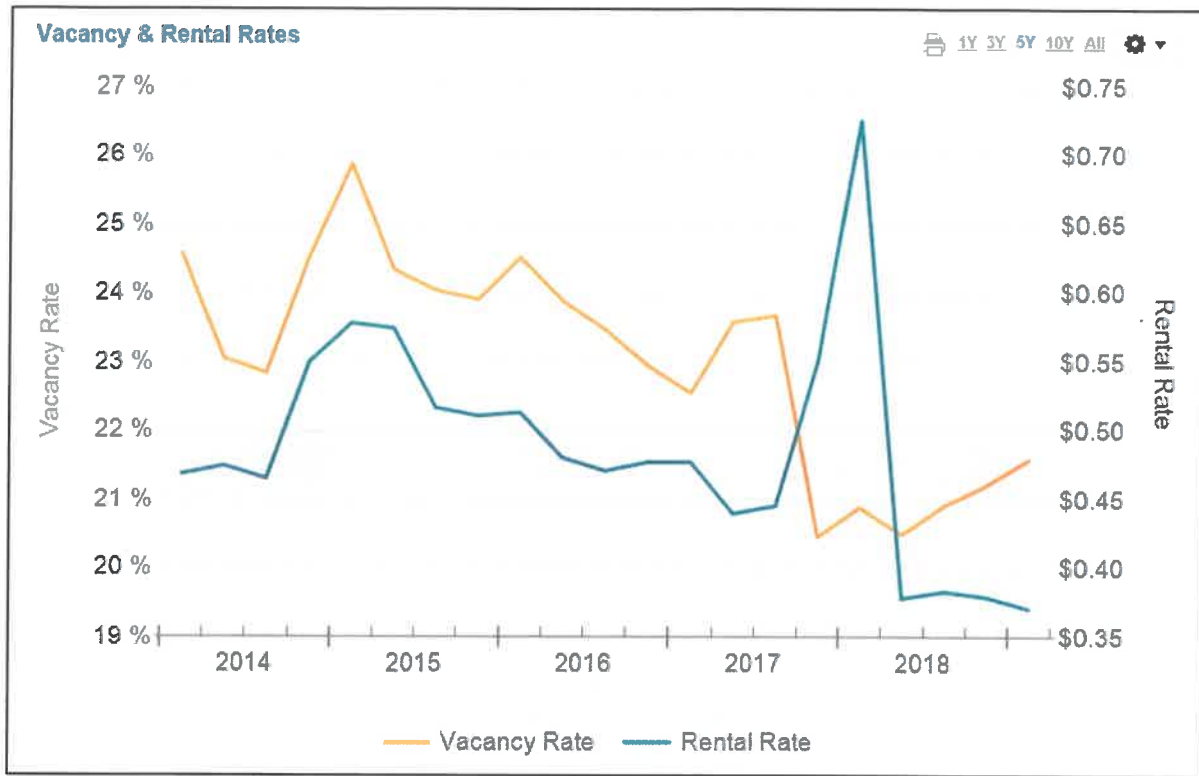
Local Industrial Marketplace

We queried the local market to get an understanding of the subject's immediate industrial market. We specifically queried all industrial buildings containing more than 10,000 square feet within 12 miles of the subject. There are 54 better quality industrial properties that fit these criteria, containing approximately 9.48 million square feet of industrial space. The locations of these properties are shown in the map to the right.



The chart below details historic industrial rental and vacancy rate trends over the past five years. During that time frame, vacancy rates have remained relatively stable until mid-2016, when rates increased due to significant new construction to the present rate of 9.2%. Asking rents have recently substantially increased as well.

Vacancy Rate and Asking Rent Trends - Victorville



Presented below is a chart detailing historic absorption, delivery, and vacancy statistics for the subject’s industrial market and a two-year market forecast based on the prior five-year averages. As indicated by the graph, future vacancy may increase significantly, without a corresponding improvement in net absorption. New construction is ongoing in the market, indicating that another market cycle may be nearing its peak.

Neighborhood Overview

The subject is located on the northeast perimeter of the City of Victorville, and approximately one mile north of SCLA. The immediate neighborhood boundaries are generally defined by the Mojave River to the east, Colusa Road to the south, Adelanto Road to the west, and Desert Flower to the north. The neighborhood has good access from State Highway 395 and Adelanto Road. The immediate area surrounding and including the subject parcels consists almost entirely of vacant desert land with the exception of SCLA and its immediate environs.

Area Infrastructure

For the most part, utilities are limited to the subject parcels. The Mojave Water Agency has a 24” water pipe running through the eastern portion of the property, parallel to Helendale Road. The pipe extends from Helendale to Hinckley. There is evidence of fiber optic cable running adjacent to Colusa Road. South of Colusa Road there is a natural gas pipeline running parallel to Colusa Road. There is also a high pressure large underground gas line running parallel to Helendale Road; it is our understanding that this line is the source of natural gas for the nearby power plant. Additionally, there is the 14” Kinder Morgan Petroleum Products Pipeline that runs along Colusa Road and the Kern River

natural gas pipeline to the northeast parallel of the subject. We did not see evidence of electrical services to the subject properties. All access to the area is via unpaved dirt roads that are in average condition.

High Desert Investment Land Overview

Our research indicates that there is a certain level of land speculation occurring in the immediate marketplace. In addition, the land market in the High Desert – from Mojave in the northwest to the Twentynine Palms in the southeast has been inefficient for decades, with pricing patterns over time that generally trend slowly upward, but are prone to inconsistencies. This is nothing new in the High Desert, land speculation in this area has been an ongoing occurrence for at least 50 years. The latest iteration of this has been a spike in some land prices in neighboring Adelanto, to the southwest – as this City has declared itself sympathetic to cannabis vendors. The duration and validity of present land speculation in this area has not influenced the subject area, and it remains to be seen if land prices in the wider market area will be affected.

We have found that a number of land sales in the local area have involved buyers with recurring company names. Our firm has extensive land valuation in the area, having conducted a large amount of land valuation work as a part of the initial development phase of SCLA in 2004 to 2008 and ongoing to the current date. As determined in our research of the area for the past 15 years, these companies (often speculators) are acquiring raw or underdeveloped land to market for immediate resale.

The parcels acquired from various entities have since been resold for an undisclosed amount to a number of private owners; providing further evidence that certain parcels were acquired for land speculation and remarketed for sale. Due to the nature of these transactions, the lack of disclosure of pricing, and the often vastly inflated sales prices of resold parcels, we have not included any of these transactions in our analysis of comparable sales.

Conclusions

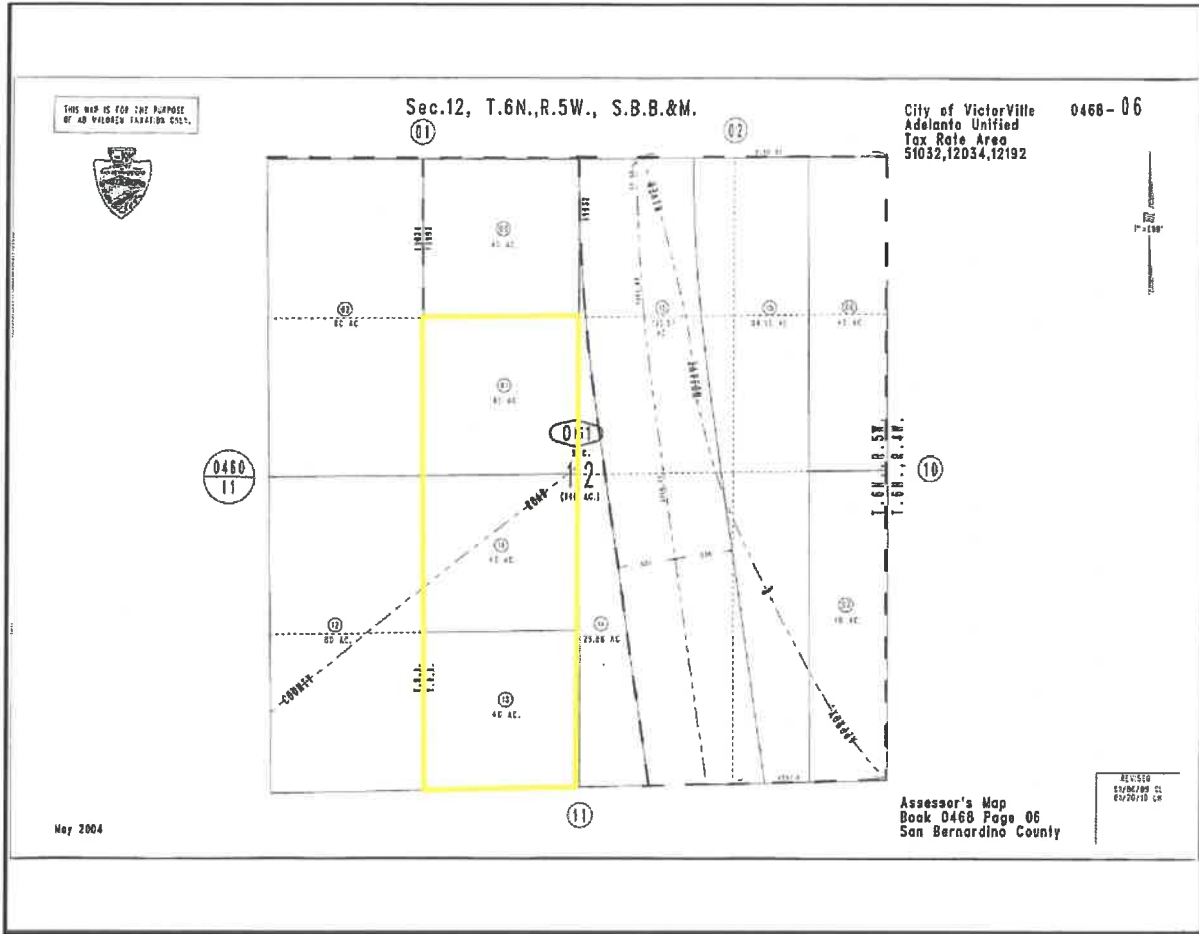
The local area of the subject property is well outside the northeast perimeter of industrial development in Victorville and Adelanto, and is considered to be within an area where land is purchased primarily for either ill-informed shorter term speculative purposes (discussed above) or for very long-term investment hold purposes. There is a vast amount of remaining developable industrial land in the area.

Although there has been some gradual development of well-located sites at SCLA, land use in the immediate area of the subject has remained stable (no change from vacant desert land status) over the past 20 years, in spite of the prior redevelopment efforts thus far on the grounds of SCLA. In general, the economic outlook for the immediate area is guardedly optimistic, should industrial development continue at SCLA.

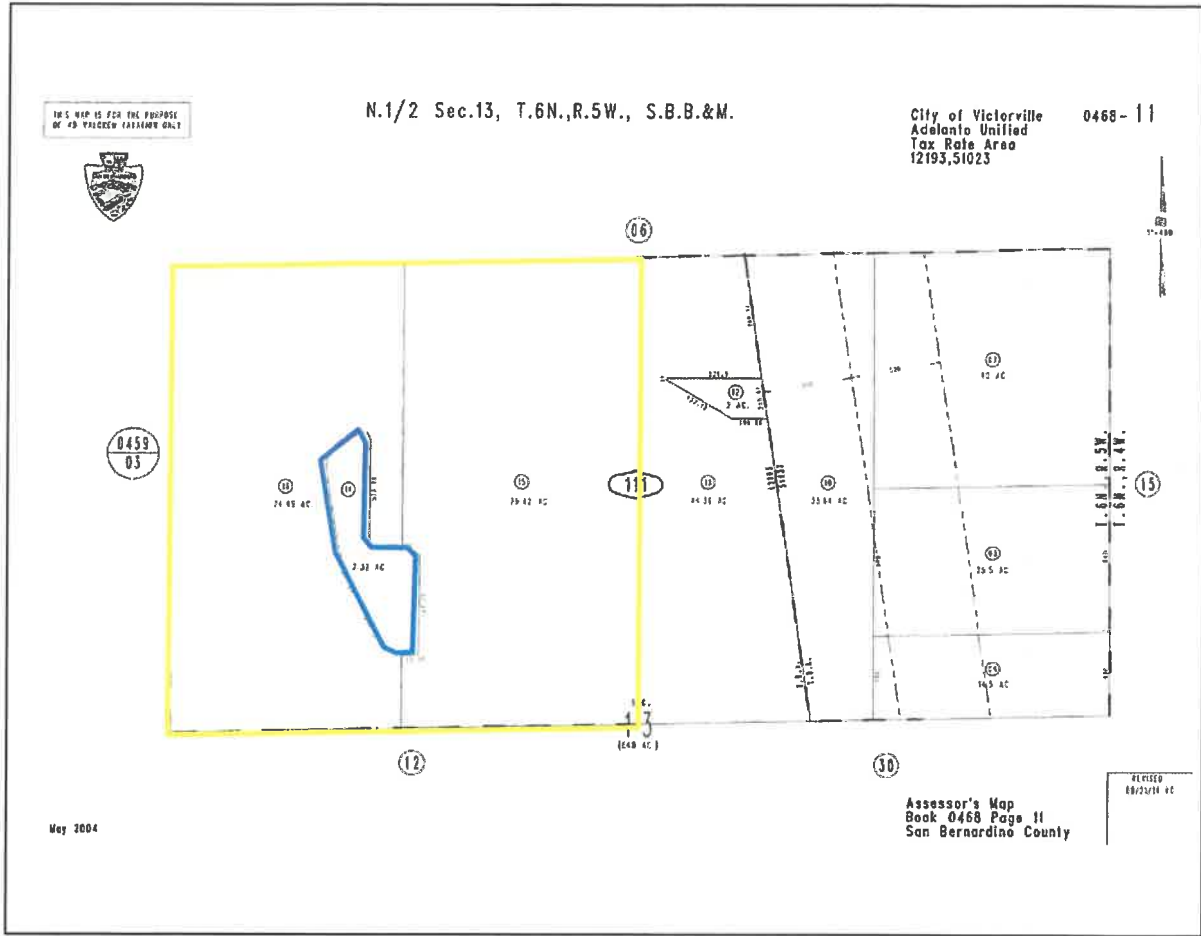
Site Map
(Easement outlined in yellow)



Subject Assessor's Maps



Subject Assessor's Maps
(Does not include - 14 outlined in blue)



DESCRIPTION OF THE SITE

Location

The subject property consists of 5 assessor's parcels on the east side of Helendale Road, south of Colusa Road and east of the Southern California Logistics Airport (SCLA), in Victorville, California.

Shape and Size

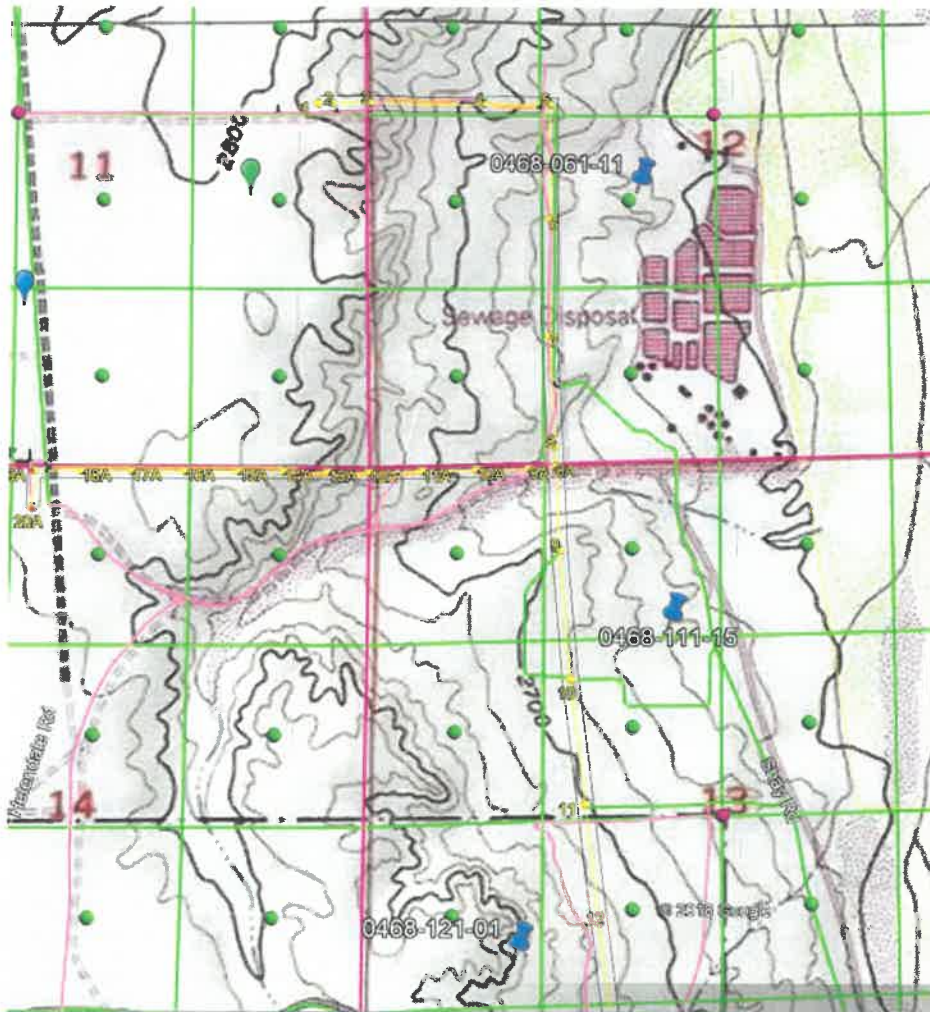
The subject site has an irregular shape; as set forth in the mapping above.

Topography and Drainage

The subject property consists of hilly / sloping desert land. A USGS topographic map of the general area of the subject proposed easement area (with the easement area highlighted in yellow) is shown at right. Elevation changes are between 10 and 50 feet throughout the property.

Soil

We have not reviewed a soils report for the subject property. Based on the surrounding development and the lack of physical evidence suggesting otherwise, it appears that the soils are of adequate load-bearing capacity to accommodate the existing use. It is a formal assumption of this appraisal that the subject soil is of adequate load-bearing capacity for the existing improvements. Most of the vacant land is previously disturbed, thus not pristine desert land.



Streets

All roads accessing the subject property are dirt roads.

Access

Vehicular access on dirt roads to the area is average.

Visibility

The subject has good visibility along Colusa and Helendale Roads.

Utilities

For the most part, utilities are limited to the subject parcels. The Mojave Water Agency has a 24" water pipe running through the eastern portion of the property, parallel to Helendale Road. The pipe extends from Helendale to Hinckley. There is evidence of fiber optic cable running adjacent to Colusa Road. South of Colusa Road there is the Kern River natural gas pipeline running parallel to Colusa Road. There is also a high pressure large underground gas line running parallel to Helendale Road; it is our understanding that this line is the source of natural gas for the nearby power plant. We did not see evidence of electrical services to the subject properties.

Environmental Observations

We have not reviewed an environmental report for the subject property nor did we observe evidence of toxic or hazardous substances during our site inspection. However, we are not trained to perform technical environmental inspections and recommend the services of a professional engineer for this purpose. We assume no responsibility for environmental hazards associated with the site or improvements.

According to the Federal Emergency Management Agency's (FEMA) Preliminary Flood Insurance Rate Maps the site is located in Community and Panel No. 06071C5805H, dated August 28, 2008 in Flood Zone "X". Zone "X" Areas are determined to be outside 500-year floodplain determined to be outside the 1% and 0.2% annual chance floodplains. Flood insurance rates are commensurate with the uncertainty of the flood risk.

Real Estate Taxes

The parcels that comprise the property are owned by the Victor Valley Waste Water Reclamation Authority, and thus are real estate tax exempt.

Easements

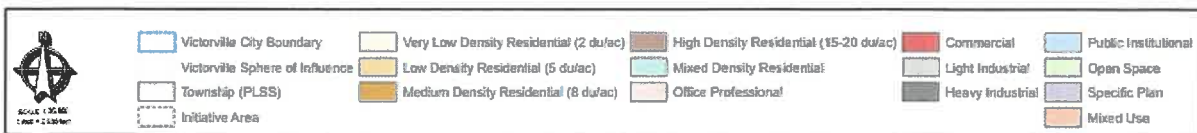
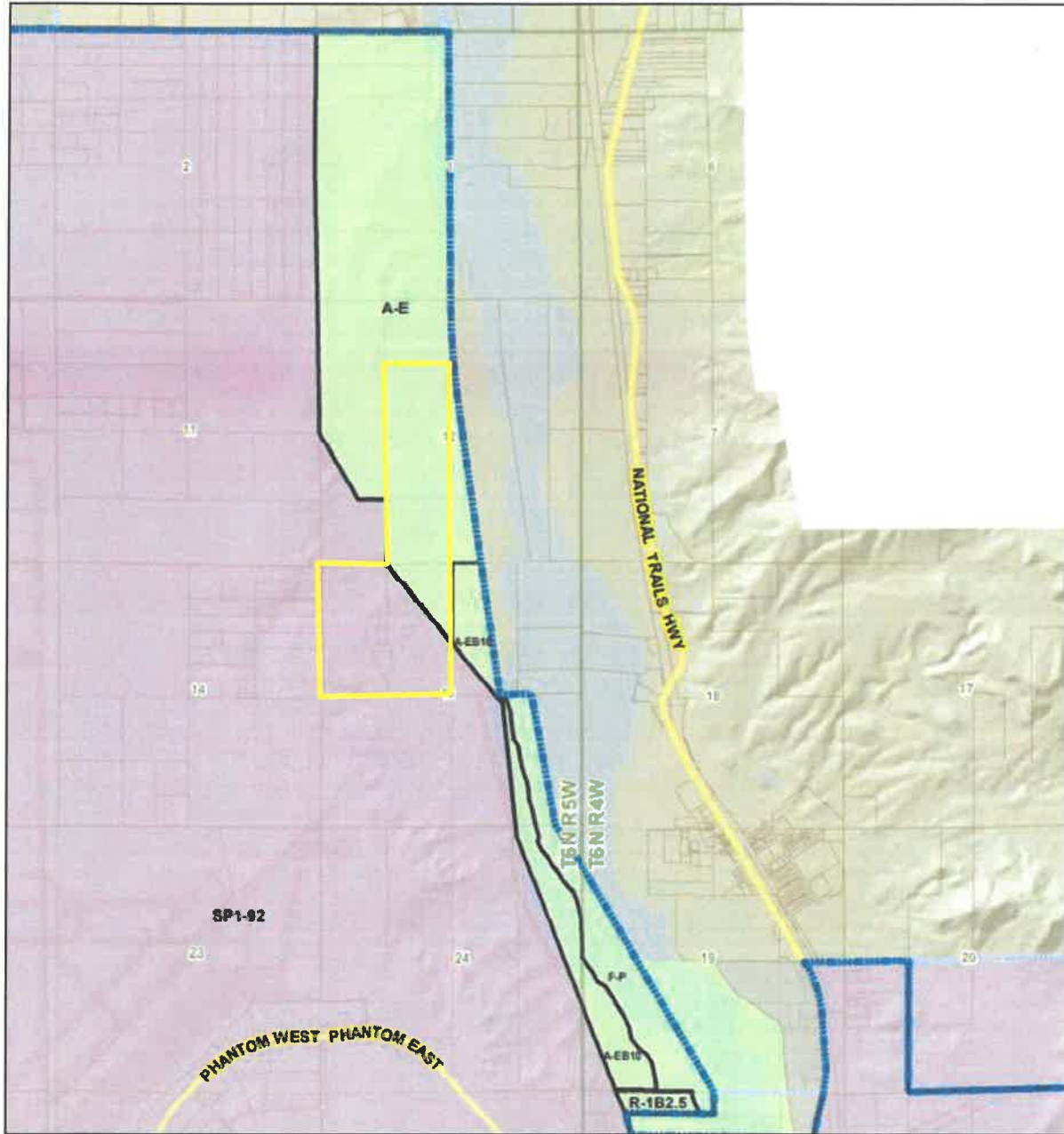
We were not given Title Reports for each subject Assessors' Parcel Number. Our valuation assumes that there are no encroachments, easements, covenants or liens that would negatively impact the marketability of the subject site. We assume no liability for clear title to the subject and reserve the right to amend our opinion of value should more information be made available.

Zoning

The subject property is zoned SP1-92 - Specific Plan and A-E, Agricultural Exclusive. This designation is intended for development of broad range of agricultural activities and open space land. This district shall be implemented consistent with uses and regulations set forth in Section 16-3.14.010 of the Victorville Municipal Code, entitled "Specific Plan District" and Section 16-3.07.010 entitled "Land Use and Special Requirements".

As further applied to the Southern California Logistics Airport Specific Plan Industrial land use district, this permitted use specifically includes inter-modal and multi-modal rail distribution facilities as defined in this Specific Plan. This also permits areas of the industrial district to be used as an intermediate staging base for any military operations.

ZONING MAP (Larger parcel outlined in yellow)



HIGHEST AND BEST USE

Definition of Highest and Best Use

The term "Highest and Best Use," as used in this report, is defined as:

"The most probable use of a property which is physically possible, approximately justified, legally permissible, financially feasible, and which results in the highest value of the property being valued."

SOURCE: Appraisal Institute, The Dictionary of Real Estate Appraisal, Fifth Edition, 2010.

There are two distinct types of Highest and Best Use. The first is the Highest and Best Use of the site as though vacant. The second is the Highest and Best Use As Improved. As the site is vacant, we have considered only this analysis below.

As Vacant

In the analysis of Highest and Best Use As Vacant, the probable uses must meet four criteria. Each use must be: physically possible, legally permissible, financially feasible, and maximally productive.

Physically Possible

The subject larger parcel consists of a total of 276.40 acres. As noted above, much of the larger parcel consists of sloping terrain that would not be subject to development. However, it is assumed that the existing soil is of adequate capacity to support proposed power tower improvements as part of a proposed power line right-of-way project. As a result, any structure that meets the other criteria outlined below and will fit the physical attributes of the sites, can theoretically be built.

Legally Permissible

To be legally permissible, the use must meet the test of private restrictions, including zoning and building codes. The subject property is zoned Specific Plan – Industrial and A-e, Agricultural Exclusive, as set forth herein.

Financially Feasible and Maximally Productive

The subject is currently unimproved sloping desert land. The subject is situated in a somewhat removed and open desert area east of the SCLA airport facility. Given the current zoning and surrounding open desert land use, the Highest and Best Use As Vacant would be to hold for long term investment purposes. As is typical for a number of properties in the surrounding area, timing for likely development would be within a period of 10 to 20 years. Even at this point, development would be highly limited due to the site topography.

METHODOLOGY

Three approaches to value form the foundation for current appraisal theory. These approaches are the Cost Approach, the Sales Comparison Approach, and the Income Capitalization Approach.

The Cost Approach is based upon the proposition that the informed purchaser would pay no more than the cost to produce a substitute property with the same utility as the subject property. It is particularly applicable when the property being appraised involves relatively new improvements that represent the highest and best use of the land, or when relatively unique or specialized improvements are located on the site and for which there exist no comparable properties on the market.

The Sales Comparison Approach utilizes prices paid in actual market transactions of similar properties to estimate the market value of the subject. This appraisal technique is dependent upon utilizing truly comparable sales data that have occurred near enough in time to reflect market conditions relative to the time period of the subject appraisal. In essence, all approaches to value are market data approaches, since the data input is from current conditions.

The Income Capitalization Approach is widely applied in appraising income-producing properties. Anticipated present and future incomes, as well as any future reversions, are discounted to the present worth figure through the capitalization process. This approach also relies upon market data to establish current economic rents and expense levels to arrive at an expected net income.

Summary

The Cost Approach has been omitted from our analysis as we are conducting a valuation of the land alone. Our valuation of the subject will utilize the Sales Comparison Approach in the valuation of the fee simple interest in the land. We have conducted a local search for transfers of similarly zoned properties. The Income Capitalization Approach is not considered to be a useful tool in the valuation of the land.

SALES COMPARISON APPROACH

Value is estimated through the use of the Sales Comparison Approach by comparing the subject property to similar properties that have sold, or are currently available for sale (subject to offer) or currently in escrow in the surrounding market. For the purpose of this approach to value, we have chosen to use the price per acre method of comparison, as this is the unit rate most used to determine value by market participants.

The subject property consists of a vacant parcel of Specific Plan zoned land. In deriving the "as is" value, we have obtained recent applicable land sales within the subject's market area. Below is a table summarizing the sales chosen for comparison. This is followed by more detailed information on each sale as well as a comparable map presenting the location of each comparable in relation to the subject.

Comparable Land Sales Survey February 2019

Land Sales Summary								
No.	Location	Site Area		Sale Date	Zoning	Sale Price	Price/Ac	Comments
		Acres	SF					
1	Colusa & Helendale Road Adelanto, CA 92301 <i>0468-061-02</i>	80	3,484,800	Active Listing	AE, SP1-92	\$995,000	\$12,438	Level Land, some topography on east side Next to Solar
2	Air Expressway & Caughlin Road Adelanto, CA 92301 <i>3210-281-01</i>	160	6,969,600	Aug-18	MI	\$1,200,000	\$7,500	Level Land
3	Colusa Road and Adelanto Road Victorville, CA 92301 <i>0460-381-02</i>	29	1,267,160	Jun-18	R-1	\$300,000	\$10,313	Level Land N/O SCLA
4	Mesa Linda Road Adelanto, CA 92301 <i>0459-411-08</i>	10	435,600	Aug-17	ADD	\$60,000	\$6,000	Proposed Industrial Level Land
5	Air Expressway Boulevard Adelanto, CA 92301 <i>0459-181-02, -30, -63</i>	65	2,842,290	Jan-16	BP	\$852,963	\$13,072	Level Land Adjacent to George AFB
6	Air Expressway Boulevard Adelanto, California 92301 <i>0459-841-007 et.al.</i>	398	17,336,880	Jan-16	BP	\$5,000,000	\$12,563	Level Land Adjacent to George AFB
SUBJECT 5 Parcels East of Helendale Road		276	12,039,984		SP1-92 A-E			

LAND COMPARABLE NO. 1
Colusa and Helendale Road
Adelanto, CA 92301



APN: 0468-061-02

PHYSICAL DATA

Sale Date:	Active Listing	Lot Size (SF):	3,484,800 SF
Sale Price:	\$995,000	Lot Size (AC):	80 AC
Price/AC:	\$12,438	Zoning:	AE and SP1-92
Financing Terms:	N/A	Shape/Topography:	Irregular/Level
Intended Use:	Unknown	Access:	Fair

Seller: Intertechland, LLC
Buyer: N/A

COMMENTS

This site consists of 80 acres of somewhat level land located directly next to the subject. The property is listed for \$995,000 or \$12,438 per acre. This property is located adjacent to the subject proposed High Desert Power facility is zoned Agricultural Exclusive and Specific Plan 1-92, which facilitates industrial and solar uses.

LAND COMPARABLE NO. 2

**Air Expressway & Caughlin Road
Adelanto, CA 92301**



APN: 3210-281-01

PHYSICAL DATA

Sale Date:	August 2018	Lot Size (SF):	6,969,600 SF
Sale Price (total):	\$1,200,000	Lot Size (AC):	160 AC
Price/AC (total):	\$7,500	Zoning:	ADD
Financing Terms:	N/A	Shape/Topography:	Flat,
Seller:	Roman & Rebecca V Martin	Access:	Inferior to Subject
Buyer:	Ecosave Land, LLC		

COMMENTS

This level site sold in August 2018 for \$1,200,000, or \$7,500 per acre and consists of flat land directly west of the Southern California Logistics Airport, located approximately 8 miles southwest of the subject. This land is zoned Manufacturing/Industrial and the land is currently unimproved. Access to this parcel is considered somewhat inferior to the subject.

LAND COMPARABLE NO. 3

**Colusa Road and Adelanto Road
Victorville, CA 92301**



APN: 0460-381-02

PHYSICAL DATA

Sale Date:	June 2018	Lot Size (SF):	1,267,160 SF
Sale Price (total):	\$300,000	Lot Size (AC):	29 AC
Price/AC (total):	\$10,313	Zoning:	R-1
Financing Terms:	N/A	Shape/Topography:	Rectangular/Level
Seller:	Juana Cortez Gutierrez	Access:	Good
Buyer:	Cerafarm, LLC		

COMMENTS

This essentially level site sold in June of 2018 for \$300,000 or \$10,313 per acre. This land is located roughly 2.24 miles northwest of the subject in a similar location. The zoning for this site is R-1, Residential, which is superior to the subject. This is a removed area with access via Adelanto Road. The intended use is undetermined.

LAND COMPARABLE NO. 4

**Mesa Linda Road
Adelanto, CA 92301**



APN: 0459-411-08

PHYSICAL DATA

Sale Date:	August 2017	Lot Size (SF):	435,600 SF
Sale Price (total):	\$60,000	Lot Size (AC):	10 AC
Price/AC (total):	\$6,000	Zoning:	ADD
Financing Terms:	N/A	Shape/Topography:	Irregular/Mostly Level,
Seller:	Kubota Mary Haruye Trust	Access:	Fair
Buyer:	Season's Land Corporation		

COMMENTS

This site sold in August 2017 for \$60,000, or \$6,000 per acre. This property consists of an essentially level site directly west of the Southern California Logistics Airport, located approximately 1.8 miles west of the subject. This land is zoned Airport Development District, and the site is currently unimproved.

LAND COMPARABLE NO. 5

**Air Expressway Boulevard
Adelanto, CA**

(General subject area circled in yellow)



APN: 0459-181-02, -30, -63

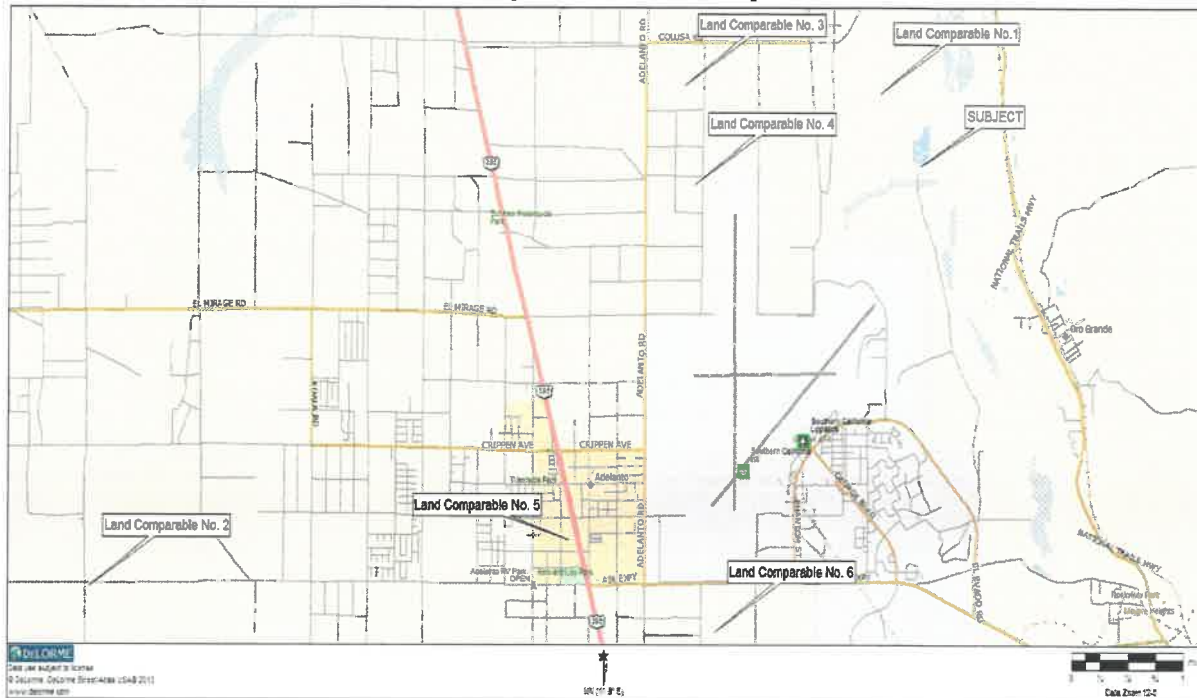
PHYSICAL DATA

Sale Date:	January 2016	Lot Size (SF):	2,842,290 SF
Sale Price (total):	\$852,963	Lot Size (AC):	65.25 AC
Price/AC (total):	\$13,072	Zoning:	BP
Financing Terms:	N/A	Shape/Topography:	Irregular/Level
Seller:	Prologis Logistics Services, Inc.	Access:	Good
Buyer:	David Mileski		

COMMENTS

This site sold in January 2016 for \$852,963, or \$13,072 per acre. This property consists of level land, with significant frontage on Air Expressway Boulevard, a superior factor of comparison to the subject. This comparable is located in an industrial area, just 3 miles south of the subject, and is zoned BP, Business Park.

Comparable Sales Map



As Is Value Analysis

The comparable sales reflected a relatively broad unadjusted range in value between \$6,000 and \$13,072 per acres. Factors such as location, size, access, street improvements and site topography explain the pricing variations. Our analysis below will provide adjustment to each comparable in relation to the subject site.

Typically an adjustment grid is prepared to further quantify adjustments to the comparables. For qualitative analysis there are then generally applied percentage adjustments to the comparables, in order to assist the reader in an understanding of the relative weight assigned to various categories. These adjustments are approximations, and are included as opposed to “inferior” or “superior” comments often found in adjustment grids, thus assisting the reader to understand the relative magnitude of adjustment of varying factors.

However, in the case of the subject, we have relied on both percentages (for conditions of sale and market conditions) and general descriptives (“inferior” or “superior”) for the balance of property characteristics. This is due to the inefficiencies inherently found in land sales in the high desert. As noted previously in our discussion of the high desert investment land market, speculation often occurs in the market and we have eliminated these transactions in our estimate of land value.

Presented below is a discussion of the factors considered in our analysis, followed by the adjustment grid.

Elements of Comparison

Financing Terms	The valuation of the subject site is based on a cash equivalent basis. To the best of our knowledge, all of the comparables represent "cash to seller" transactions and no adjustment is required for this category.
Conditions of Sale	Adjustments for this element usually reflect the motivations of the buyer and seller. If a party to a transaction was under duress or if atypical motivations affected the price, an adjustment is required. To the best of our knowledge, none of the sales required adjustment for conditions of sale. Comparable 1 has been adjusted here for its listing status, with a downward adjustment applied for the typical difference between listing and selling price.
Market Conditions	The comparable properties were acquired between June of 2016 and June of 2018, with one active listing also used. Sales of vacant land sites in this market overall are considered of insufficient sample size from which to derive a trend in pricing. In addition, our interviews with local brokers and other market participants indicates essentially flat market conditions, we have not applied any appreciation or depreciation to land values over this time frame.
Location	The desirability of each improvement's location was compared to that of the subject. Those sales located in closer proximity to Victorville and existing light industrial or commercial development are generally superior, while those transactions in more removed desert locations are inferior.
Zoning	Industrial and related land uses are considered most similar to the subject, with rural uses determined to be inferior.
Road Access	Access is considered a very important component in valuation, as the subject features only dirt road access at present. Parcels with paved road access are considered clearly superior to the subject.
Topography	The topography of the subject is rolling, and is inferior to the nearly level topography of all of the comparables. This comparison category is considered a critical input in the overall valuation of the subject site.
Parcel Size	Economies of scale and market behavior tend to increase the price of significantly smaller land parcels, and we have made adjustments for properties that are significantly larger or smaller than the subject. Typically, the price per unit is skewed downward marginally when properties are significantly larger than the subject and conversely, small properties typically have higher prices. Therefore, adjustments were made to properties that were either significantly larger or smaller than the subject.

The adjustment grid for the subject property is presented below:

Comparable Adjustment Grid

Comparable Land Sales - Adjustment Grid						
	1	2	3	4	5	6
Date of Sale	Active Listing	Aug-18	Jun-18	Aug-17	Jan-16	Jan-16
Parcel Size (acs)	80.00	160.00	29.09	10.00	65.25	398.00
Price per Acre	\$12,438	\$7,500	\$10,313	\$6,000	\$13,072	\$12,563
Conditions of Sale	-15.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Financing Terms	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Adjusted Price	\$10,572	\$7,500	\$10,313	\$6,000	\$13,072	\$12,563
Market Conditions	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
Adjusted Pad \$/Acre	\$10,572	\$7,500	\$10,313	\$6,000	\$13,072	\$12,563
Location	Similar	Slightly Inferior	Slightly Inferior	Similar	Slightly Superior	Superior
Zoning / Highest and Best Use	Similar	Similar	Similar	Similar	Similar	Similar
Road Access	Similar	Similar	Similar	Similar	Superior	Superior
Topography	Superior	Superior	Superior	Superior	Superior	Superior
Utilities	Similar	Similar	Similar	Similar	Superior	Superior
Parcel Size	Similar	Similar	Slightly Superior	Slightly Superior	Similar	Similar
Net Adjustment	<i>Slightly Superior</i>	<i>Slightly Inferior</i>	<i>Slightly Inferior</i>	<i>Slightly Superior</i>	<i>Superior</i>	<i>Superior</i>
Final Adjusted Approximate Price per Acre	\$9,500	\$8,000	\$10,000	\$7,000	\$10,000	\$10,000

After adjustment, the indicated *adjusted* value range for the subject emerges between \$7,000 and \$10,000 per acre. The average adjusted price is \$9,083 per acre, while the median adjusted price is \$9,750 per acre; these calculations are presented for informational purposes, and not utilized as a determinant of value.

There is a relatively wide range of value after adjustment, due to the scarcity of larger land transactions, which is a function of the relative (compared with other areas of metropolitan Southern California) lack of market activity, the differences between the comparables, and a rather inefficient market for desert-oriented land.

Upon review of the entire data set, we have slightly given greater weight to Comparables 1, 3 and 4 due to their proximity to the subject location and relatively recent date of sale. These comparables again suggest an adjusted range of value for the subject from \$7,000 to \$10,000 per acre. Secondary weight was given to the remaining comparables. We have paid particular attention to the sloping topography of the subject (and the resulting lack of developability of the site) in our value conclusion.

Based on our years of appraisal experience in the area surrounding SCLA and the adjusted comparable data, we would anticipate a present land value range for the subject site from \$7,000 to \$9,000 per acre. Given the analysis and discussion presented above, we are concluding the As Is Market Value of the property as noted below:

Value Conclusion – Larger Parcel

Based on the preceding analysis, we are concluding with the following As Is Market Value:

276.4 acres X \$8,000 per acre \$2,211,200
Indicated As Is Market Land Value – Larger Parcel (Rounded) .. \$2,200,000

EASEMENT ANALYSIS

Value of the Parcel Proposed for Easement

The previous section related to the valuation of the Larger Parcel which is required in order to estimate value for the site area proposed for the easement. In this case we will determine the value of the easement and then take into account damages or severance value, if any, related to the taking of the easement.

Description of the Easement

According to the client, the proposed acquisition of the easement area contains 16.33 acres in total, based on drawings submitted in the Addenda. It is our understanding that HDSI, LLC intends to acquire a portion of the Larger Parcel in order to install power lined easements to connect a proposed flat panel solar power plant to the existing High Desert natural gas power plant interconnect. The easement over the larger subject site will be located within linear corridors, covering the land area noted above.

As the site is unimproved, no demolition of structures will be necessary. The primary effect of the acquisition on the Larger Parcel is to reduce its purely fee ownership size from 276.40 acres to 260.07 acres. The size of the easement is 5.91% of the larger parcel. It is our opinion that the reduction to the Larger Parcel is minimal. The current use as hilly and sloping land with power lines overhead is unaffected by the easement.

A servient estate is defined as: "A property burdened by an easement; also known as the servient tenement. The servient estate is the opposite of the dominant estate (also known as the dominant tenement), which benefits from an easement."⁷

The market value of the servient estate, in its "before" condition is the same as the fee simple market value conclusion, stated above (also shown in the table summary - below).

The valuation of the servient estate in its "after" (the easement) condition utilizes the same comparable sales data and factors of comparison as the valuation of the servient estate in its "before" condition. The primary factor of the proposed easement is the loss of land. However the loss of land is minimal, and does not negatively affect the larger parcel or the current use.

Purchase of the easement rights represents a portion of a total bundle of rights typically associated with ownership of property. A fee simple acquisition represents 100% of the bundle of rights, while varying types of easements typically have a lesser impact. The proposed easement rights are noted below, and presented in the Addenda:

"The Easement may be used to construct, alter, access, maintain, inspect, repair, reconstruct, replace, add to and operate one or more electric transmission facilities or electric distribution and communication facilities, consisting of one or more circuits, together with wires, cables, fibers, poles, guys and anchors, conduits, pull boxes, vaults, fixtures, surface or pole mounted transformers, switchgear and other appurtenances connected therewith, including any

⁷ The Dictionary of Real Estate Appraisal, 2015 - Appraisal Institute, Page 212.

necessary access roads (hereinafter referred to as the "Utility Facilities"), across, upon, over, under, and through the Easement."

In the case of the proposed subject powerline easement, the land surface must be available for right of way maintenance and repair purposes. It is our understanding the proposed easement term will be in perpetuity. As a result of the proposed easement, the subject has defined development constraints on any other use on the proposed easement portion. Although minimal, the detriment of the easement is a loss of land and use for the duration of the easement, which is considered a permanent easement into perpetuity. There were no damages estimated for the larger parcel.

Based on the above factors discussed above, the total calculation of the indicated loss to the servient tenement is at 80% of the full fee of the affected land area as the easement affects development under, on, and over the easement area.

Value of the Proposed Powerline Easement Portion

The land area of the subject easement is 16.33 acres. To determine a per acre value of the land in fee simple (prior to the calculation for the easement) we will use the same land value developed in determining the value of the Larger Parcel. After the determination of the value of the easement, the value of 80% will be calculated. The estimated value is calculated as follows:

16.33 acres x \$8,000 per acre	\$130,640
80% of the fee simple value	\$104,512
Power Line Easement Value Conclusion	\$105,000

Severance Damages

Severance is the diminution, or decline in the market value of the Remainder Area in the case of the proposed powerline easement, which arises either 1) by reason of the taking (severance), and/or 2) the construction of the improvement in the manner proposed. In the case of the subject, severance damage could potentially arise from the easement of 16.33 acres. It is our opinion that the easement does not negatively impact the value of the Remainder Area, as it neither restricts the use of the land, require the demolition of any existing improvements, or will impact the Remainder Area. Based on the factors discussed above, there are no severance damages to the Remainder Area due to the easement. A summary of the value estimates are included below:

<i>Proposed Power Line Easement - Value Summary</i>		
Part Take Calculations Summary:		
Area of Larger Parcel:	(Acres)	276.400
Est. Unit Value:	(Per Acre)	\$8,000
Estimated Land Value		\$2,211,200
Value Estimate of Larger Parcel (Rounded):		\$2,200,000
Easement (Proposed) Area:	(Acres)	16.3300
Estimated Unit Value:	(Per Acre)	\$8,000
Estimated Land Value - Easement		\$130,640
Overhead Powerline Easement Value (Rounded)	80.00%	\$105,000

Estimate of Fair Market Ground Rent – Easement Component

Norris Realty Advisors has recently completed a regional study to determine the market-desired range of the rate of return for both commercial and industrial site ground leases throughout Southern California. The rate is referred to as a “yield rate” or “capitalization (cap) rate” interchangeably. We have reviewed databases, market surveys, and interviewed commercial brokers, land owners, land lessees, as well as municipalities and public agencies throughout the region (table below).

Our data source relates to a number of *actual* (confidential) *ground lease transactions*, as opposed to abstract surveys of large governmental agencies or land owners, which are frequently presented in rote fashion as the basis for an estimate of a market derived rate. Our survey was conducted within the past six months, reflecting present market requirements for yield rates from ground leases. The data reveals a relatively broad range of current rates between 3.75% and 9.0%, with a concentration of results in a range from 5% to 8%.

Return Rate Survey - Ground Leases	
Source	Target Return Rate
PwC Yield Indicator (PYI) 2nd Quarter 2018	7.55%
Major National Warehouse Retailer Ground Lease	5.0% to 6.5%
Major National Warehousing Owner	4.5% to 5.5%
Mark Anderson- Development Partners, LLC	6% to 9%
Joe Carrol - Resource One	7% to 8%
Greg Trotter- Coldwell Banker Commercial	6% to 8%
Christopher Sheehan - Colliers International	5% to 5.5%
Port of Los Angeles - Ground Lease Contracts	5% to 7%

The survey data suggests a probable range of yield for the subject using this methodology from approximately 5% to 8%. The level of demand for industrial land, the ample supply of available larger development sites in the High Desert, and the current relatively low vacancy rates all contribute toward a yield rate for the subject in a range from 5.0% to 8.0%. The subject site enjoys a secondary location with only dirt road access north of the SCLA facility on the outskirts of Victorville.

Based on our survey results, and our understanding of the market positioning of the subject, we have concluded an appropriate ground lease rate specific to the subject property to be based on a rate of 6.5%. The ground lease would be structured a net basis to the ground lessor, with all operating expenses being paid by the property tenant. Fair market ground rent for the easement portion only would then be calculated as follows:

\$105,000 X 6.5% \$6,825
Annual Fair Market Rent – Easement Land Area (Rounded) \$6,800

ADDENDA

**Exhibit I
Proposed Easement Rights Description / Drawings / Legal Descriptions**

GRANT OF POWER LINE EASEMENT

_____, a [STATE ENTITY], hereinafter called "Grantor", hereby grants to HDSI, LLC, a Delaware limited liability company, its successors and assigns, hereinafter called "Grantee", all those certain permanent and exclusive easements and rights of way to construct, use, maintain, alter, add to, enlarge, repair, replace, inspect, or remove, at any time and from time to time, electric lines, consisting of metal towers, wood or metal poles, "H" frame structures, guy wires and anchors, crossarms, wires and other fixtures and appliances and communication circuits (including communications lines) with necessary appurtenances, both overhead and underground, for conveying electric energy to be used for light, heat, power, telephone or other purposes, in, under, on, over, along and across [[a][_____] ()] strip[s] of land, [each _____ () feet wide,]] hereinafter described and designated as "Right of Way Strip," lying within that certain real property of the Grantor, situated in the County of San Bernardino, State of California, described as follows:

[INSERT LEGAL]

The said Right of Way Strip is described on Exhibit A and more particularly shown on the Exhibit B, both attached hereto and by this reference made a part hereof.

Grantor further grants, bargains, sells and conveys unto the Grantee the right of assignment, in whole or in part, to others, without limitation, and the right to apportion or divide in whatever manner Grantee deems desirable, any one or more, or all, of the easements and rights, including but not limited to all rights of access and ingress and egress granted to the Grantee by this Grant of Power Line Easement.

Grantor also hereby grants to Grantee, its successors and assigns, an easement to construct, use, maintain and repair an access road in, on, over, along and across a strip of land _____ () feet wide, lying within that certain real property in said County and State, described as follows:

The said _____ () feet wide strip is described as Strip 1 on the Exhibit A and more particularly shown on the Exhibit B, both attached hereto and by this reference made a part hereof.

Grantor hereby also grants to Grantee, its successors and assigns, and its and their contractors, agents, and employees, the right to clear and to keep clear said Right of Way Strip, free from explosives, buildings, equipment, brush, combustible material and any and all other obstructions of any kind (except for those herein provided) and the right to trim or remove any tree or shrub which in the opinion of Grantee, may endanger said electric lines or any part thereof or interfere with the exercise of the rights herein granted.

It is further understood and agreed that no other easement or easements shall be granted on, under or over said Right of Way Strip by Grantor to any person, firm or corporation without the previous written consent of Grantee.

The terms, covenants and conditions of this Grant of Power Line Easement shall bind and inure to the benefit of the successors and assigns of Grantor and the successors and assigns of Grantee.

IN WITNESS WHEREOF, Grantor has caused this instrument to be executed by its officers thereunto duly authorized, this ____ day of _____, 2019.

Exhibit II – Legal Descriptions and Easement Maps

EXHIBIT "A"

APN: 0468-061-01

LEGAL DESCRIPTION OF PARCEL: (41.05 ACRES)
 THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 12, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO STATE OF CALIFORNIA.

LEGAL DESCRIPTION OF EASEMENT AREA: (0.33 ACRES)
 THE SOUTH 120.00 FEET OF THE WEST 120.00 FEET OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 12, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO STATE OF CALIFORNIA.

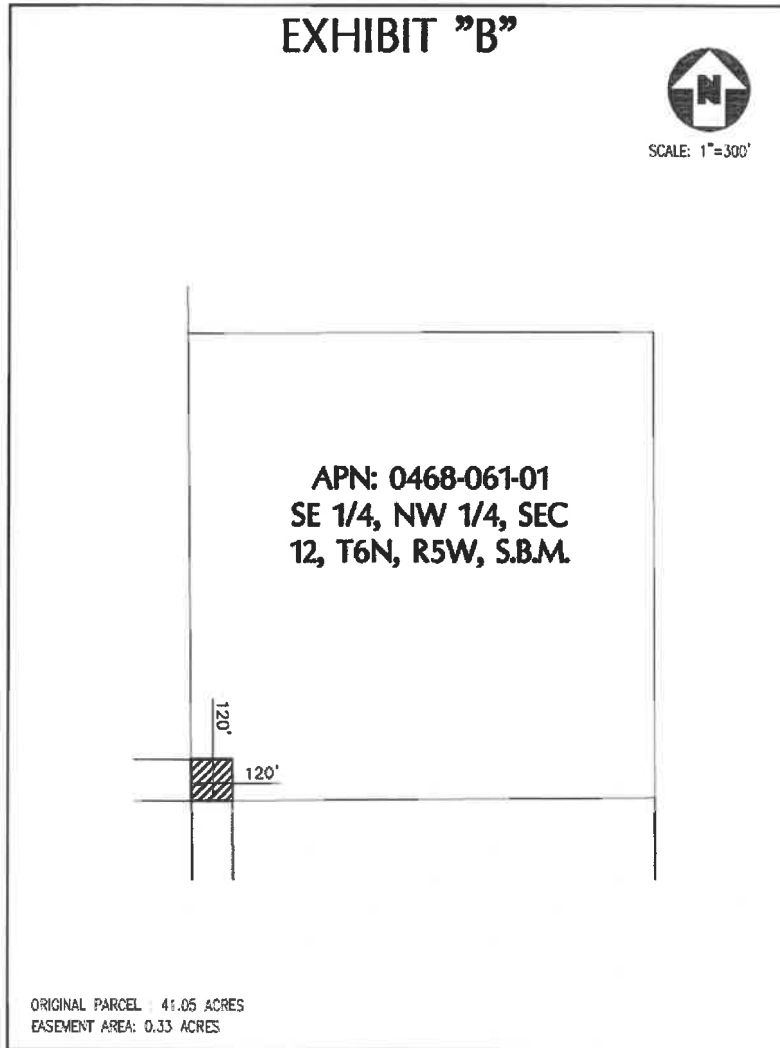


EXHIBIT "A"

APN: 0468-061-10

LEGAL DESCRIPTION OF PARCEL: (40.60 ACRES)

THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 12, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

LEGAL DESCRIPTION OF EASEMENT AREA: (3.70 ACRES)

THAT PORTION OF THE SOUTHEAST 1/4 OF SECTION 12, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A STRIP OF LAND 120.00 FEET WIDE LYING 120.00 FEET EAST AND NORTHEAST OF THE FOLLOWING DESCRIBED LINE:

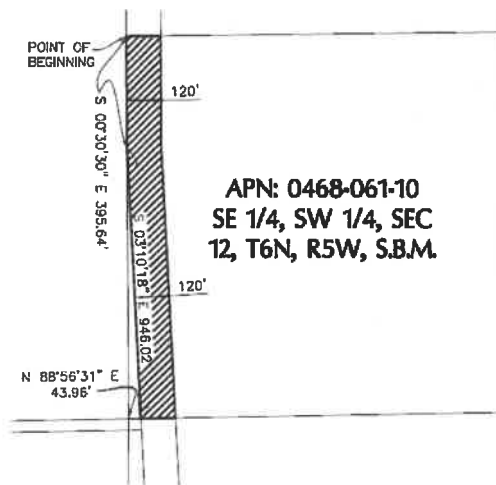
BEGINNING AT THE NORTHWEST CORNER OF SAID SOUTHEAST 1/4 THENCE SOUTH 00°30'30" EAST ALONG SAID THE WEST LINE OF SAID SOUTHEAST 1/4, THENCE LEAVING SAID WEST LINE SOUTH 03°10'18" EAST A DISTANCE OF 946.02 TO A POINT ON THE SOUTH LINE OF SAID SOUTHEAST 1/4, SAID POINT BEING NORTH 88°56'31" EAST 43.96 FEET FROM THE SOUTHWEST CORNER OF SAID SOUTHEAST 1/4.

THE SIDELINES OF SAID STRIP SHALL BE LENGTHENED OR SHORTENED TO TERMINATE ON THE NORTH AND SOUTH LINES OF SAID SOUTHEAST 1/4.

EXHIBIT "B"



SCALE: 1"=300'



ORIGINAL PARCEL 40.60 ACRES
EASEMENT AREA 3.70 ACRES

EXHIBIT "A"

APN: 0468-061-11

LEGAL DESCRIPTION OF PARCEL: (40.77 ACRES)

THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 12, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

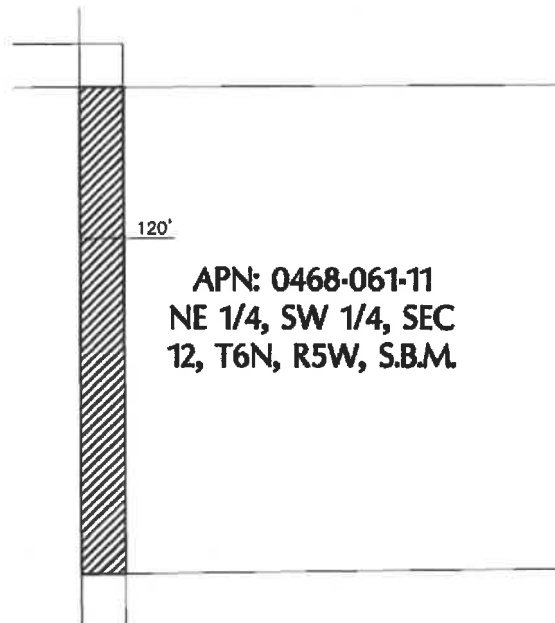
LEGAL DESCRIPTION OF EASEMENT AREA:(3.69 ACRES)

THE WEST 120.00 FEET OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 12, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

EXHIBIT "B"



SCALE: 1"=300'



ORIGINAL PARCEL : 40.77 ACRES
EASEMENT AREA: 3.69 ACRES

EXHIBIT "A"**APN: 0468-111-15**LEGAL DESCRIPTION OF PARCEL: (79.45 ACRES)

THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA,

EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF VICTORVILLE BY GRANT DEED RECORDED AUGUST 14, 2014 AS INSTRUMENT NO. 2014-0202025 OFFICIAL RECORDS.

LEGAL DESCRIPTION OF EASEMENT AREA:(7.40 ACRES)

THAT PORTION OF THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

THE NORTH 40.00 FEET OF THE WEST 50.00 FEET,

TOGETHER WITH A STRIP OF LAND 120.00 FEET WIDE LYING 120.00 FEET EAST AND NORTHEAST OF THE FOLLOWING DESCRIBED LINE:

BEGINNING AT A POINT ON THE NORTH LINE OF SAID EAST 1/2, SAID POINT BEARING NORTH 88°56'31" EAST ALONG THE NORTH LINE A DISTANCE OF 43.96 FEET FROM THE NORTHWEST CORNER OF SAID EAST 1/2, THENCE SOUTH 03°10'16" EAST A DISTANCE OF 689.04 FEET, THENCE SOUTH 05°16'22" EAST A DISTANCE OF 968.31 FEET, THENCE SOUTH 07°25'08" EAST A DISTANCE OF 1012.24 FEET TO A POINT ON THE SOUTH LINE OF SAID EAST 1/2, SAID POINT BEARING NORTH 89°11'04" EAST ALONG THE SOUTH LINE OF SAID EAST 1/2 A DISTANCE OF 311.59 FEET FROM THE SOUTHWEST CORNER OF SAID EAST 1/2.

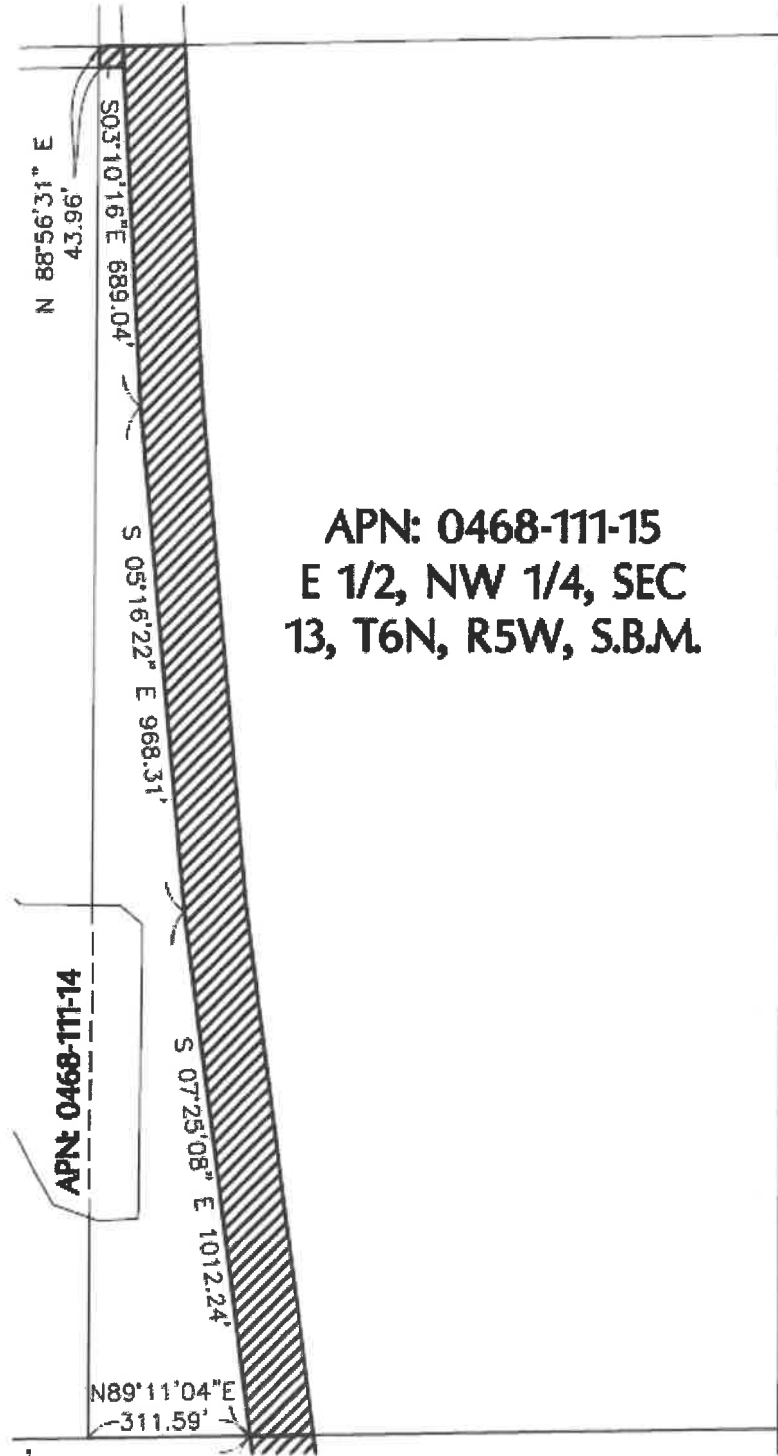
THE SIDELINES OF SAID STRIP SHALL BE LENGTHENED OR SHORTENED TO TERMINATE ON THE NORTH AND SOUTH LINES OF SAID EAST 1/2.

EXHIBIT "B"



SCALE: 1"=300'

APN: 0468-111-15
E 1/2, NW 1/4, SEC
13, T6N, R5W, S.B.M.



APN: 0468-111-14

ORIGINAL PARCEL : 79.45 ACRES
EASEMENT AREA: 7.40 ACRES

EXHIBIT "A"

APN: 0468-111-16

LEGAL DESCRIPTION OF PARCEL: (74.53 ACRES)

THE WEST 1/2 OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA,
EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF VICTORVILLE BY GRANT DEED RECORDED AUGUST 14, 2014 AS INSTRUMENT NO. 2014-0202025 OFFICIAL RECORDS.

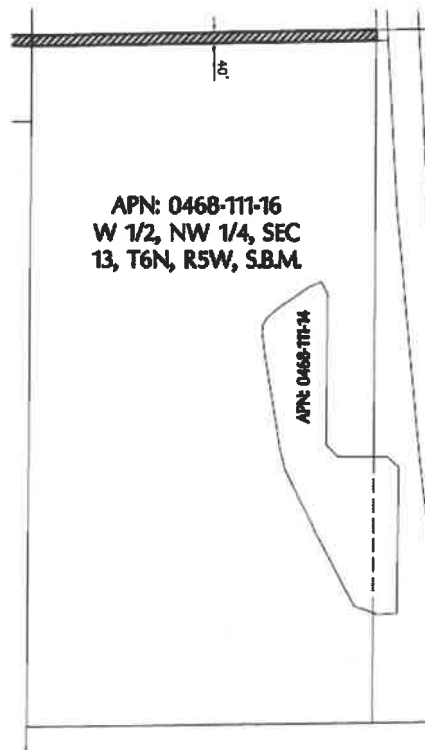
LEGAL DESCRIPTION OF EASEMENT AREA:(1.21 ACRES)

THE NORTH 40.00 FEET OF THE WEST 1/2 OF THE NORTHWEST 1/4 OF SECTION 13, TOWNSHIP 6 NORTH, RANGE 5 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA.

EXHIBIT "B"



SCALE: 1"=400'



ORIGINAL PARCEL: 74.53 ACRES
EASEMENT AREA: 1.21 ACRES

Exhibit III
Subject Flood Map

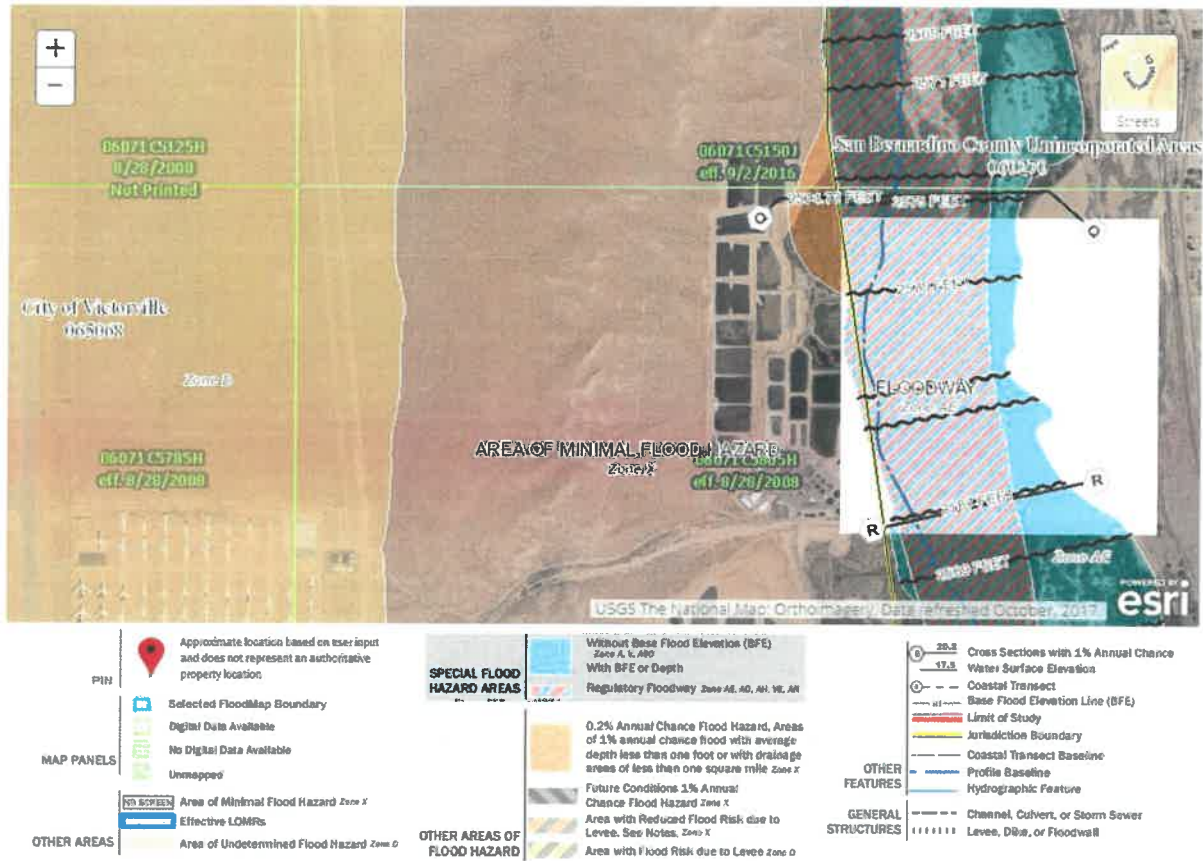
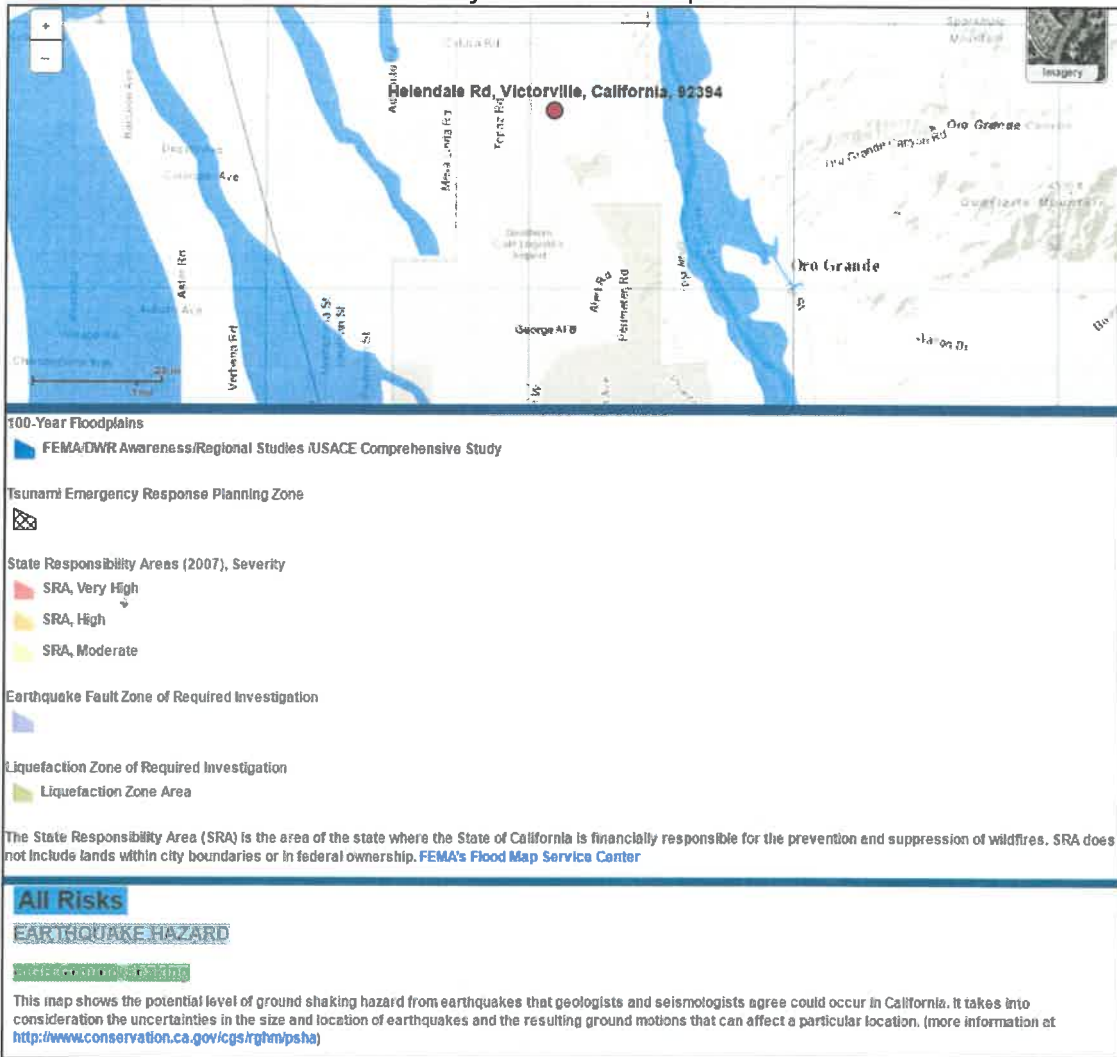


Exhibit IV Subject CalHazards Map



QUALIFICATIONS OF STEVEN R. NORRIS, MAI, CRE

Norris Realty Advisors
 101 E. Green Street, Suite 9
 Pasadena, California 91105
 (626) 405-9922

EDUCATION

University of California at Los Angeles - Bachelor of Arts, Majoring in Economics 1980

PROFESSIONAL DESIGNATIONS

Member - Appraisal Institute (No. 7716)
 Counselor of Real Estate – CRE
 Fellow, Royal Institution of Chartered Surveyors – June 2005
 State of California General Certification No. AG001677

EXPERIENCE

Thomas W. Erickson, MAI – Santa Monica, California	1980 - 1985
CBRE Appraisal and Consultation – Los Angeles, California	1985 - 1991
CRW Associates – Pasadena, California	1991 – 1999
Principal, Norris Realty Advisors	2000-Present

SIGNIFICANT ASSIGNMENTSCommercial

Commercial assignments completed over the last 35 years include the valuation of an extensive variety of major mid and high-rise office towers (ranging in size from 100,000 to over 2,800,000 square feet); the appraisal of a new 100,000+ square-foot health club facility; and the valuation of a wide variety of major medical office buildings. Appraisal of numerous larger neighborhood, subregional and regional shopping centers, involving detailed cash flow analysis for lending, securitization, and public finance. The completion of numerous absorption, market demand, fair rent studies, highest and best use analyses, and computer cash flow studies relating to commercial development, portfolio analysis, and asset review. Extensive experience with the Argus 15 and Enterprise cash flow programs.

Industrial

Industrial assignments include valuation and consultation on a 51 acre major manufacturing facility in urban Los Angeles, improved with 1,100,000 square feet of improvements; the appraisal of over 700 acres for acquisition and development of a solar/gas-fired power plant in Victorville, California; valuation of a number of highly specialized aerospace research and development facilities (500,000 to over 1,000,000 square feet) in several states; the appraisal of a wide variety of mid- and larger-sized freestanding industrial and manufacturing facilities; valuation of numerous master planned business parks, and oversight of numerous land-use and development studies.

Residential

The valuation of a number of larger (300+ units) luxury apartment complexes in the western United States; affordable housing in urban areas, and the appraisal of a number of single-family housing developments. The valuation of a variety of congregate care senior housing facilities throughout the western U.S.

Other

Assignments also include a wide variety consulting, valuation and litigation support efforts related to "specialized use" properties, including: charter schools, affordable housing, numerous specialized use government and military facilities including realigned air force bases; a 1,300 acre Air Force weapons plant; consultation on the master planned redevelopment of the 3,700 acre El Toro military facility in Orange County, California; specialized consultation involving military property redevelopment and reuse, military housing, including two major facilities in Alaska. Mr. Norris has extensive experience in national pension fund portfolio advising. Experience in Alaska, California, Arizona, Texas, Idaho, Montana, Utah, Colorado, Connecticut, Pennsylvania, and Illinois. Qualified as an expert witness in numerous depositions in Los Angeles and Kern County Superior Court, and in US Bankruptcy

Appraisal — 3630A – VWWRA - High Desert Power Plant Easement, Victorville, CA

Court. Current Board Member and Past President of the Southern California Chapter of the Appraisal Institute. Current member; National Education Committee, and Consulting Corps and prior member Counselors of Real Estate National Ethics Committee. Current Member of the Standard Setting Committee of the International Ethics Standards Coalition (IESC).

Expert Testimony and Arbitration

Deposed as an expert over 30 times for various real estate valuation matters.

LAUSD v. Perihan Shefik – Eminent Domain Proceedings
Commercial Property Acquisition
Deposition & Court Testimony – Los Angeles County Superior Court

Southern California Edison v. Vivian Moreno, Jay K. Minn and Shaun K. Minn
Agricultural Property – Transmission Line Partial Take
Deposition & Court Testimony – Kern County Superior Court

Mellone v. Santa Monica Mountains Conservancy
Partial Taking of Hiking Trail Easement
Court Testimony – Los Angeles County Superior Court

Hot Rods LLC v. Northrup Corporation
Value Effect on alleged groundwater contamination
Arbitration Testimony – Orange County

Private Arbitration Panelist
Insurance Loss Panel Member
Commercial Property – Bell Gardens, California

Fair Market Rent Determination / Arbitration
Port of Los Angeles / Maersk Lines
Port of San Diego / Private Heavy Shipyard

Publications

“Up, Up, and Away! The Closure and Redevelopment of Lowry Air Force Base” by Steven R. Norris, MAI Pgs. 13-15 Valuation Insights & Perspectives, Fourth Quarter 2000

“George Air Force Base: Hopes for Conversion to Global Intermodal Hub” by Steven R. Norris, MAI Pgs. 16, 18 Valuation Insights & Perspectives, Appraisal Institute

“Valuing March Air Force Base” by Steven R. Norris, MAI pg. 34 Valuation Insights & Perspectives, Second Quarter 1999 (Steven R. Norris. 1999. “Valuing March Air Force Base.” Valuation, insights, and perspectives, v.4, n.2, p. 34.)

“Valuation of a Major High-rise and Entertainment Facility” by Steven R. Norris, MAI pgs. 47-48, Valuation Insights & Perspectives Second Quarter 1998

Featured and quoted in:

“In a Field of One” by Heather Norgaard, pgs. 14-15 Valuation (Appraisal Institute), Third Quarter 2010

Repeated citing in the Los Angeles Times by commercial real estate writer Roger Vincent.

Appraisal — 3630A — VWWRA - High Desert Power Plant Easement, Victorville, CA

Higher Education / Instruction

Instructor - UCLA Extension

- Commercial Real Estate Market Analysis and Commercial Real Estate Investment Properties
- Argus Discounted Cash Flow and Argus Enterprise Software
- Member – Real Estate Curriculum Advisory Board 2014-2016
- Lecturer – UCLA Anderson School / Ziman Center for Real Estate

Professional Service

Board Member – President 2015 – Southern California Chapter of the Appraisal Institute

Service – Regional Ethics Administration – Appraisal Institute

National Ethics Committee, National Education Committee, Consulting Corp Member - Counselors of Real Estate Member, Standards Setting Committee – International Ethics Standards Coalition



Victor Valley Wastewater Reclamation Authority



Financial and Cash Report

August 2019

Executive Summary of Financial Statements

For the Month Ended August 31, 2019

1. Cash balance at August 31, 2019 was \$11.09 million with sufficient reserves for operation, repairs/replacement, and SRF loan principal and interest payments.

Targeted Capital Reserve:

O&M Reserve: 10% of Prior Year Budgeted Operating Expenses	\$	1,372,099
R&R Reserve: 1% of Land Improvements/Plants/Interceptors PY		2,954,450
Reserve for SRF Payments (P& I) - Operating		2,761,134
Reserve for SRF Payments (P& I) - Capital		2,386,726
Available for O&M		<u>1,611,821</u>
Total Cash	\$	<u>11,086,229</u>

2. The August 2019 financial statements show a deficit of \$330,506 after \$1.0 million depreciation expense. The depreciation expense is a part of financial statements but does not affect our cash flow.
3. The current month user fee revenue is lower than a budgeted monthly average amount by \$67,000, while the connection fee revenue is under by \$86,000 from the monthly budget. The revenues reflect billed amounts for the month, while the expenses are what the staff actually processed during the month. Further, some of the budgeted expenses may not have incurred at this early stage of the fiscal year.



Chieko Keagy, Controller

Victor Valley Wastewater Reclamation Authority
CASH AND RESERVE SUMMARY
 August 31, 2019

G/L Account	Description	Balance
1000	DCB Checking Account	\$ 1,113,000
1030	DCB Sweep Account	759,503
1075	Cal TRUST	6,353,429
1070	LAIF	2,860,297
	Total Cash	<u>\$ 11,086,229</u>

\$65 mil Max

Reserves:	Current Balance	Restricted	Assigned	Not Assigned
Targeted Capital Reserve	\$ -	\$ -	\$ -	\$ -
O&M Reserve: 10% of Prior Year Budgeted Operating Expenses	1,372,099		1,372,099	
R&R Reserve: 1% of Land Improvements/Plants/Interceptors PY CAFR	2,954,450		2,954,450	
Reserve for SRF Payments (P& I) - Operating	2,761,134	2,761,134		
Reserve for SRF Payments (P& I) - Capital	2,386,726	2,386,726		
Available for O&M	1,611,821	-		
Total Cash	<u>\$ 11,086,229</u>	<u>\$ 5,147,860</u>	<u>\$ 4,326,548</u>	<u>\$ -</u>

Note 1: ACCUMULATION FOR SRF LOAN PAYMENTS:

	9.5 MGD, 11.0 MGD, NAVI, Phase III-A	Upper Narrows Replacement	Nanticoke Bypass	Sub- Regional Apple Valley	Sub- Regional Hesperia	Total
Reserve for SRF Payments (P& I) - Operating	\$ 782,105	257,745	203,725	625,220	892,339	\$ 2,761,134
Reserve for SRF Payments (P& I) - Capital	1,348,576	-	67,908	399,731	570,512	2,386,726
	<u>\$ 2,130,681</u>	<u>257,745</u>	<u>271,633</u>	<u>1,024,951</u>	<u>1,462,850</u>	<u>\$ 5,147,860</u>

Payment Schedule

9.5 MGD	September	\$ 265,050
Upper Narrows Replacement	December	257,745
NAVI	February	258,151
Subregional - AV	February	1,024,951
Subregional - HES	February	1,462,850
11.0 MGD	April	579,870
Phase III-A	June	1,027,610
Nanticoke	June	271,633
		<u>\$ 5,147,860</u>

Victor Valley Wastewater Reclamation Authority
Statement of Net Position
August 31, 2019

<i>Assets and Deferred Outflows of Resources</i>	2019
Current assets:	
Cash and cash equivalents	\$ 11,033,213
Interest receivable	12,598
Accounts receivable	3,121,833
Receivable from FEMA Grants	3,679,746
Accounts receivable - Other	11,477
Allowance for Doubtful Accounts	(89,459)
Materials and supplies inventory	85,674
Prepaid expenses and other deposits	118,937
Total current assets	17,974,019
Fixed assets:	
Capital assets not being depreciated	3,164,380
Capital assets being depreciated	186,691,412
Total capital assets	189,855,792
Total assets	207,829,811
Deferred outflows of resources	
Deferred outflows of resources - pension	1,742,472
Total	\$ 209,572,283
<i>Liabilities, Deferred Inflows of Resources, and Net Position</i>	
Current liabilities:	
Accounts payable and accrued expenses	\$ 503,487
Accrued interest on long-term debt	275,043
Long-term liabilities - due within one year:	
Compensated absences	48,647
Loans payables	1,849,149
Other payables	6,852
Total current liabilities	2,683,178
Non-current liabilities:	
Long-term liabilities - due in more than one year:	
Compensated absences	239,372
Other post employment benefits payable	2,285,368
Loans payable	81,926,050
Net Pension Liability	5,750,574
Other payables	242,819
Total non-current liabilities:	90,444,183
Total liabilities	93,127,361
Deferred inflows of resources	
Deferred inflows of resources - pension	89,437
Net position:	
Net investment in capital assets	122,731,832
Restricted for SRF loan covenant	5,285,091
Unrestricted	(10,423,666)
Decrease in net position FY 19	(1,237,772)
Total net position	116,355,485
Total	\$ 209,572,283

Victor Valley Wastewater Reclamation Authority
Revenues and Expenses
Operations and Maintenance
For the Month Ended August 31, 2019

	Actual August 2019	YTD Actual FY 19-20	Approved Budget FY 19-20
REVENUES			
User Charges	\$ 1,139,989	\$ 2,269,854	\$ 14,480,700
Sludge Flow Charge	9,411	18,605	120,000
High Strength Waste Surcharges	-	158	20,000
ADM FOG Tipping Fee Revenue	23,321	46,243	250,000
Septage Receiving Facility Charges	53,045	118,401	600,000
Reclaimed Water Sales	756	1,967	25,000
Potable Well Water Sales	62	119	-
Leased Property Income	50	100	-
Interest	114	228	-
Pretreatment Fees	4,300	9,700	50,000
Finance Charge	-	-	-
Grant - FEMA/Cal-EMA	-	-	-
Grant - Proposition 1	-	-	-
Grant- Water Recycling	-	-	-
Grant- CEC Microgrid	-	-	-
Sale of Assets, Scrap, & Misc Income	-	-	1,200
Total REVENUES	\$ 1,231,048	\$ 2,465,375	\$ 15,546,900
EXPENSES			
Personnel	\$ 455,016	\$ 896,571	\$ 4,589,786
Maintenance	29,233	147,757	2,236,156
Operations	89,846	320,826	3,433,514
Administrative	50,509	262,130	1,812,648
Construction	-	450	-
Total EXPENSES	\$ 624,604	\$ 1,627,734	\$ 12,072,104
Revenues over Expenses before Depreciation, Debt Service and Transfers	\$ 606,444	\$ 837,641	\$ 3,474,796
Depreciation Expense	(1,027,101)	(2,054,202)	-
FEMA CalOES Retention	-	-	-
DEBT SERVICE			
SRF Principal	-	-	2,039,479
SRF Interest	-	-	732,612
	\$ -	\$ -	\$ 2,772,091
FUND TRANSFERS IN			
Salary/Benefits Charge from Capital	-	-	-
Admin Charge from Capital	-	-	-
Total FUND TRANSFERS IN	\$ -	\$ -	\$ -
FUND TRANSFERS OUT			
Transfer to Repairs and Replacements Fund	-	-	702,705
Inter-fund loan payment to Capital	-	-	-
Total FUND TRANSFERS OUT	\$ -	\$ -	\$ 702,705
Excess Revenues Over Expenses	\$ (420,657)	\$ (1,216,561)	\$ -

Victor Valley Wastewater Reclamation Authority
Revenues and Expenditures
Repairs and Replacement
For the Month Ended August 31, 2019

	Actual August 2019	YTD Actual FY 19-20	Approved Budget FY 19-20
REVENUES			
R&R Revenues	\$ _____	\$ _____	\$ _____
Total REVENUES	\$ _____ - \$ _____ -	\$ _____ -	\$ _____ -
OTHER FINANCING SOURCES			
SRF Loan Funding	\$ _____ -	\$ _____	\$ 1,963,621
CAPITAL EXPENSES			
Personnel	\$ -	\$ -	\$ -
Maintenance	19,590	64,738	1,896,326
Operations	-	54,332	-
Administrative	-	-	145,000
Construction	-	-	625,000
Total CAPITAL EXPENSES	\$ 19,590	\$ 119,070	\$ 2,666,326
Revenues over Expenses before Debt Service and Transfers	\$ (19,590)	\$ (119,070)	\$ (702,705)
FUND TRANSFERS IN			
Transfer from Operations and Maintenance Fund	\$ -	\$ -	\$ 702,705
Interfund Loan Payment from O&M	-	-	-
Total FUND TRANSFERS IN	\$ -	\$ -	\$ 702,705
FUND TRANSFERS OUT			
Salary/Benefits Charge to O & M	\$ -	\$ -	\$ -
Admin Charge to O & M	-	-	-
Total FUND TRANSFERS OUT	\$ -	\$ -	\$ -
Excess Revenues Over Expenses	\$ (19,590)	\$ (119,070)	\$ -

Accrual Basis

Victor Valley Wastewater Reclamation Authority
Revenues and Expenditures
CAPITAL
For the Month Ended August 31, 2019

	Actual August 2019	YTD Actual FY 19-20	Approved Budget FY 19-20
REVENUES			
Connection Fees	\$ 101,858	\$ 101,858	\$ 2,254,625
Title 16 Grant - Subregional	-	-	-
Grant- Water Recycling	-	-	-
Sale of Assets, Scrap, & Misc Income	-	-	-
Interest	17,529	37,082	50,000
Proposition 1 Grant	-	-	-
Proposition 84 Grant	-	-	-
FMV Adjustment	24,907	12,436	-
CEC Microgrid Grant	-	-	-
Grant - FEMA/Cal-EMA	-	-	-
Total REVENUES	<u>\$ 144,294</u>	<u>\$ 151,376</u>	<u>\$ 2,304,625</u>
CAPITAL EXPENSES			
Personnel	\$ 34,553	\$ 53,518	\$ 384,910
Maintenance	-	-	-
Operations	-	-	171
Administrative	-	-	50,000
Construction	-	-	550,000
Total CAPITAL EXPENSES	<u>\$ 34,553</u>	<u>\$ 53,518</u>	<u>\$ 985,081</u>
Revenues over Expenses before Debt Service and Transfers	<u>\$ 109,741</u>	<u>\$ 97,858</u>	<u>\$ 1,319,544</u>
DEBT SERVICE			
SRF Principal	\$ -	-	\$ 1,981,331
SRF Interest	-	-	405,396
	<u>\$ -</u>	<u>-</u>	<u>\$ 2,386,727</u>
FUND TRANSFERS IN			
Capital Recovery - Septage from O&M	\$ -	-	\$ -
Interfund Loan Payment from O&M	-	-	(1,963,621)
Total FUND TRANSFERS IN	<u>\$ -</u>	<u>-</u>	<u>\$ (1,963,621)</u>
FUND TRANSFERS OUT			
Salary/Benefits Charge to O & M	\$ -	-	\$ -
Admin Charge to O & M	-	-	-
Total FUND TRANSFERS OUT	<u>\$ -</u>	<u>-</u>	<u>\$ -</u>
Excess Revenues Over Expenses	<u>\$ 109,741</u>	<u>\$ 97,858</u>	<u>\$ (3,030,804)</u>

Accrual Basis

Victor Valley Wastewater Reclamation Authority
Flow Study
For the Month Ended July 31, 2019

Measured by ADS	Percentage of Total %	April Monthly MG
VSD 1 (less North Apple Valley)	5.9673%	21.4076
VSD 2	13.8644%	49.7385
VSD 3	25.2606%	90.6223
VSD 4	6.7813%	24.3278
VSD 5	0.7400%	2.6546
VSD 6	6.4454%	23.1229
VSD Total	59.0590%	211.8737
Apple Valley 03	16.7667%	60.1503
Apple Valley North	0.0478%	0.1715
Apple Total	16.8145%	60.3218
Hesperia	18.7141%	67.1367
CSA 64 SVL	4.7192%	16.9301
CSA 42 Oro Grande	0.6933%	2.4872
CSA Total	5.4125%	19.4173
Total Apportioned Flow	100.0003%	358.7495
<u>Mojave Narrows Regional Park</u>		<u>0.1000</u>
<u>Total Study Flow</u>		<u>358.8495</u>

Victor Valley Wastewater Reclamation Authority



Operations and Maintenance Report

August 2019

VWRA O&M Monthly Report – August 2019

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**Victor Valley Wastewater Reclamation Authority
Operations and Maintenance Report
August 2019**

TO: Brian Macy, General Manager
FROM: Operations & Maintenance Staff
SUBJECT: OPERATIONS/MAINTENANCE REPORT
DATE: September 19, 2019

The following information details the operation of the Victor Valley Wastewater Reclamation Authority Facility. Included in this report is pertinent information regarding flows, process control information, process sampling, permit requirements, operations activities, and facility maintenance activities. This report is based on O&M activities for August 2019.

	Total	Average
Effluent to Mojave	176.3202	98.973
Effluent to Ponds	176.3202	3.8067
		Limit
Biochemical Oxygen Demand (BOD)		10 mg/l
Effluent to Mojave	<4.77	
Percent Removal	>98.333	
		Limit
Total Suspended Solids (TSS)		10 mg/l
Effluent to Mojave	<2.3	
Percent Removal	>99.438	
		Limit
Turbidity		2.0 ntu
30 Day Average	0.43	

Major Operations Activities

Headworks

The Headworks area operated as intended throughout the months with normal equipment maintenance performed on a weekly basis.

Primary Treatment

Overall removal efficiency of the primary clarifiers was 41.99% removal of influent BOD and 70.30% removal of TSS. Typical operating parameters are 25 to 35 percent removal of BOD and 50 to 60 percent removal of TSS. The primary sludge concentration averaged 2.50 % total solids at 85,203 gallons per day.

Primary clarifiers: #1,#3,#4, #5, #6,#7 and #8 are currently online and continue to treat all incoming flow. Primaries #4 remained offline for the month. With one clarifier off line, the remaining 7 primary clarifiers are capable of treating peak flows up to 27 MGD.

The digester gas conditioning system remains online. The system will prevent premature wear and tear on engines #2 & #3 by removing siloxanes by the addition of ferric chloride. The system increases fuel pressure to the blower gas system, allowing for more output from the blower engine. Digester #4 and 5 gas is mixed and sent to the gas conditioning system. This all but eliminates the use of Natural gas to run engines #2 and #3.

Staff continues to add ADM/ Grease to Daft #3 from Primaries and truck deliveries where it is then feed it to Digesters #4 and #5. This operation is assisting in additional grease removal from the primary clarifiers and increased gas production in the anaerobic digesters.

Secondary Process

Secondary Clarifiers #1 thru #6 are currently offline, not needed at this time.

Aeration basins #1 thru 12 have been retrofitted with the new Aquarius diffusers and are currently performing very well reducing the RPM's on the Piller blower. Currently basins #1-6 and 7-12 are online.

Piller #1 is supplying air to basins #1-6, mixed liquor channel and aerated grit chamber. Piller #6 is supplying air to AB's #7-12.

Staff continues to monitor the solids under aeration and SVI to compare against the SRT Master Control Program. The SRT Master program is performing well. The secondary process has been performing well as a result of the SRT Master Control Program. Weekly Nitrogen studies performed by VVWRA staff produced results below regulatory requirements.

Secondary turbidity averaged 1.47 (NTU) during the month of August 2019
The 30 minute settleometer test averaged 107.0 mL/L.
The average "pop time" of the MLSS was >90 min.

Percolation Ponds

South percolation ponds #8, #10, #11, #12 and #13 were used and rotated during the month. South Percolation Pond #7 is offline and out of rotation.

All Percolation Pond freeboard level requirements have been met during the month. All ponds are being rotated on a daily basis. Percolation Pond #6 remains off line and drained to minimal levels. No flow seepage has been observed. The north percolation ponds were used sparingly during the month.

Tertiary Filters

Aqua Diamond Filters #1 and #2 were utilized for the month of August. Filter Effluent average Turbidity of 0.59 NTU.

Solids

VVWRA O&M Monthly Report – August 2019

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Staff has been operating Digester #4 and #5 at predetermined sludge levels which is controlled by the SCADA system.

VVWRA received 493,691 gallons of ADM (Anaerobically Digestible Material) and FOG (Fats Oil and Grease). Total is comprised of 429,232 gallons of ADM and 64,459 gallons of FOG.

A Total 17,731,150 day of gas was created by digesters #4 and 5 for the month of August 2019.

That is an average gas production of 681,967cf/day.

Digester #4 averaged 347,011cf/day.

Digester #5 averaged 334,957cf/day.

Digester Volatile Acid/Alkalinity averaged 0.0145 for the month.

Ultra Violet Disinfection (UV)

The UV system is currently operating via one channel mode.

Monthly UV intensity probe and flow meter calibration checks were performed.

Permit Continuous Monitoring Requirements and Permit Violations

All permit required, continuous monitoring equipment was on-line, in calibration and working properly during the month.

Date of last reportable incident: March 10, 2015

Days since last reportable incident: 1,635 days

Discharge Sampling

All required samples during the month of August 2019 were collected and processed as scheduled.

Maintenance Activities

CMMS Work Order Activity

VVWRA KPI Report

8/28/2019
9:59 AM

8/1/2019 - 8/31/2019

KPI	Count	Percent
Planned Work Total	252	
Planned Work Completed	232	92.06%
Planned Work Completed On-Time	191	75.79%
Planned Work Incomplete	20	7.94%
Planned Work Completed Late	44	17.46%
Total Work Completed	496	
Reactive Work Completed	69	14.20%
PM Work Completed	374	76.95%

Safety

1. Monthly Vehicle Safety Inspections completed.
2. Monthly gas tech monitor inspections completed.
3. Monthly Eyewash safety showers inspected.
4. Monthly SCBA inspections.
5. Hazardous storage area inspection.
6. Spill kit inspections.

VVWRA O&M Monthly Report – August 2019

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Preliminary Process

1. Aqua Guard pre-treatment screen inspected and serviced.
2. Headwork's Conveyor Belt Lube & Inspect.
3. Grit classifier monthly lube.

Primary Process

1. All PH and conductivity probes cleaned and calibrated.
2. Influent PH and conductivity probe calibrations complete.

Secondary Process

1. Piller blowers 1 & 6 weekly inspections complete.
2. Service Air compressors inspection and service completed.
3. Waukesha engines inspections.
4. Piller #1 and #6 Filters Replacement.

Tertiary

1. Monthly gear box and platform drive wheel service complete
2. Filter #1 & #2 monthly platform gear box PM's comp
3. Monthly festoon inspection.
4. Filter #1 & #2 monthly backwash wasting pumps oil checks complete
5. All PH and conductivity probes cleaned and calibrated.

Ultra Violet Disinfection (UV)

1. PH and conductivity probes cleaned and calibrated
2. UVT probe calibrated
3. UV Compliance sample pumps foot valve cleaning.
4. UV MCC filters cleaning.

Treatment Disposal

1. DAFT #1 and #2 Air Compressors 1&2 PM services complete.
2. DAFT monthly lube.
3. Digester 1-3 ongoing repairs.
4. DAFT 2 pump PM completed.

Miscellaneous Plant

1. Emergency generator monthly test.
2. Monthly Blower buildings AHU filter replacement.

2G/CHP 1&2

1. Monthly UREA refill completed CHP #1 & #2
2. CHP1&2 differential pressure readings taken within normal range, Gas DP pressure collected within normal range.
3. Monthly gas samples collected.

Gas Conditioning Skid

1. Monthly gas sampling collected.
2. Monthly gas conditioning skid inspection.

OGPS

1. Monthly Generator Test completed.

Hesperia WRP

1. Plant generator test completed.
2. Air scrubber monthly lube.

Hesperia LS

1. Plant generator test completed.

AVWRP

1. Plant generator test completed.
2. Monthly air scrubber blower lube.

AVPS OTOE LS

1. Monthly Emergency generator test.

OFFROAD EQUIPMENT

1. Brown Bear weekly PM's completed.
2. JCB front loader weekly PM's complete.

FLEET

1. Monthly fleet inspections completed pumps, vehicles, hose reel trailer, light towers.

VVWRA O&M Monthly Report – August 2019

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Victor Valley Wastewater Reclamation Authority



Environmental Compliance Department Report

August 2019

VWRA Environmental Compliance Department
Industrial Pretreatment Program

I. Interceptors Operation and Maintenance:

1. Interceptors cleaning & CCTV: None in August 2019

2. Interceptors Inspections:

The following interceptors were visually inspected for signs of damage, vandalism and evidence of sanitary sewer overflows:

- ✓ South Apple Valley & North Apple Valley.
- ✓ Schedule 1, 2, 3 & 4
- ✓ UNE Bypass HDPE pipe
- ✓ Hesperia, I Ave and Santa Fe.
- ✓ CSA 64
- ✓ Adelanto
- ✓ SCLA1

3. Damage and repair summary:

- ✓ No Damage found during inspections and no repair was needed or performed.

4. Sanitary sewer overflows (SSO) summary:

- ✓ Date of last reportable SSO: August 30th, 2018

5. Interceptors maintenance budget remaining:

- ✓ The fiscal year 2019-2020 Interceptor sewer maintenance amount remaining for sewer cleaning and inspection services is \$90,000.00

6. Dig Alert Underground tickets processed:

- ✓ A total of One hundred and Eighty-Six (186) USA Tickets were received and processed in August 2019.

7. Flow monitoring Studies:

- ✓ A flow monitoring study by ADS Environmental is continuing.

II. Industrial pretreatment Activities:

1. **New Business Questionnaires and permits applications evaluated:**
 - ✓ Thirteen (13) New Business Questionnaires were processed in the month of August 2019.
 - ✓ Zero (0) New Business Inspection was conducted in the month of August 2019.
2. **New permits issued:**
 - ✓ Zero (0) New permits were issued in the month of August 2019.
3. **Permit renewals issued:**
 - ✓ Thirteen (13) Class III permit renewals were issued in the month of August 2019.
4. **Work Orders:**
 - ✓ 54 Work Orders were completed in August 2019
5. **Monthly revenues collected, and invoices issued:**
 - ✓ Revenues: \$1,100
 - ✓ Invoiced: \$4,300

III. Industrial Pretreatment Activities (continued)

1. Current enforcement actions:

- ✓ No Notice of Violations were issued in August 2019.

2. Current active industrial pretreatment permits:

- ✓ The current number of VVWRA's industrial wastewater discharge permits is 429, they are comprised as follows:

1	Class I	Categorical Industrial User
11	Class II	Non-Categorical Significant Industrial User
406	Class III	Non-Significant Industrial User
1	Class IV	Zero Discharge Industrial User
14	Class V	Sanitary Waste Haulers

- ✓ The permitted establishments include:

17	Automotive Service Facility
12	Bakery
1	Brewery/Winery
20	Car Wash/Truck Wash/Bus Wash
3	Coffee Shop
9	Dry Cleaner
299	FSE
22	Grocery Store
3	Hospital
3	Misc. Food
3	Misc. Industrial
4	Other
1	Photographic
1	Print Shop
1	Prison
3	School
4	Water Retail
14	Waste Haulers

- ✓ Permitted businesses are distributed among member entities as follows: 166 in Victorville, 123 in Apple Valley, 116 in Hesperia and 1 in Oro Grande.

Victor Valley Wastewater Reclamation Authority



Environmental Compliance Department

Septage/FOG/ADM Monthly Report

August 2019

1. Septage/FOG/ADM receiving invoices and payments monthly report:

Payments and Invoices period: August 1st thru August 31st – Septage rate per Gallon: \$ 0.0936
FOG/ADM rate per Gallon: \$ 0.04

Receiving invoices

ID No	Septage Hauler	Invoice Date	Total Gallons	Invoice Amount
ABS000	Absolute Pumping	8/28/2019	30,540	\$2,858.54
ALP000	Alpha Omega Septic Service	8/28/2019	159,705	\$14,948.39
BUR000	Burns Septic	8/28/2019	124,000	\$11,606.40
HIT000	Hitt Plumbing	8/28/2019		\$
HON001	Honest Johns Septic Service, Inc	8/28/2019	109,661	\$10,264.27
RIG001	Right Angle Solutions	8/28/2019		\$
ROT001	T.R. Stewart Corp. dba Roto Rooter	8/28/2019	66,212	\$6,197.44
USA000	USA Septic	8/28/2019	76,600	\$7,169.76
ALP000	Alpha Omega Septic Service (Nutro)	8/28/2019	83,789	\$3,351.56
COW000	Co-West Commodities	8/28/2019	150,000	\$6,000.00
LIQ000	Liquid Environmental Solutions of CA	8/28/2019	0	\$0
SMC000	SMC Grease Specialist, Inc.	8/28/2019	355,500	\$13,420.00
WES004	West Valley MRF, LLC Burrtec Waste Industries, Inc.	8/28/2019	0	\$0
HIT000	Hitt Plumbing	8/28/2019	13,740	\$549.60
Grand Totals			1,169,747	\$78,365.96

Septage/FOG/ADM receiving payments:

ID No	Business Name	Payments Received
ABS000	Absolute Pumping	\$4,000.96
ALP000	Alpha Omega Septic Service	\$0
BUR000	Burns Septic	\$10,483.20
HON001	Honest Johns Septic Service, Inc	\$7,279.46
RIG001	Right Angel Solutions	\$0
ROT001	T.R. Stewart Corp. dba Roto Rooter	\$10,933.60
USA000	USA Septic	\$10,389.60
ALP000	Alpha Omega Septic Service (Nutro)	\$0
COW000	Co-West Commodities	\$6,000.00
LIQ000	Liquid Environmental Solutions of CA	\$0
SMC000	SMC Grease Specialist, Inc.	\$6,000.00
WES004	West Valley MRF, LLC Burrtec Waste Industries, Inc.	\$0
HIT000	Hitt Plumbing	\$0
Grand Total		\$55,284.69



Safety & Communications Report



Cleaning UV bulbs at Hesperia WRP



August 2019



Safety

STAFF SAFETY TAILGATE/ORIENTATION

- August 1--Fall protection
- August 8--Lone worker devices
- August 15--Workplace stress
- August 21--LOTO
- August 27--Making good decisions
- August 29--eyewash and shower





Safety

SAFETY EVENTS/ TRAINING

- Safety tailgates
- Daily, weekly and monthly plant inspections
- Field ergonomics class
- DAMS Air Pack Derby

UNSAFE CONDITIONS REPORTED/RESOLVED

DATE OF LAST RECORDABLE ACCIDENT/INJURY:
APRIL 22, 2019

DAYS SINCE LAST RECORDABLE ACCIDENT/INJURY:
130 DAYS



Safety

NEXT MONTH'S SCHEDULE OF STAFF TRAINING/SAFETY EVENTS :

- Safety Tailgates will be conducted at the Thursday weekly staff briefings.
- Safety Tailgates will be conducted at the bi-monthly Administrative staff meetings.
- Safety Committee meeting
- Overhead crane training
- Front end loader training

Communications

- Preparing next Purple Pipe which went to print in early September.
- Maintained VWRA website and social media sites including Facebook & Twitter.





Communications

- Helped organize and run the CWEA/ DAMS Air Pack Derby in Crestline.
- Represented VWRA at San Bernardino County Water Conference
- CWEA Community Engagement committee
- Hesperia Golf Course recycled water review and tour

