

MEETING NOTICE

Joint Coordinating Committee

For The Truckee Meadows Water Reclamation Facility

DATE: November 3, 2021
TIME: 10:00 a.m.
PLACE: Truckee Meadows Water Reclamation Facility – Training Center
8500 Clean Water Way, Reno NV 89502

Posting: This Agenda is posted at Reno City Hall, Sparks City Hall, and the Washoe County Administration Complex. Further, in compliance with NRS 241.020, this notice has been posted to the official website for the City of Reno at www.reno.gov, the City of Sparks at <https://cityofsparks.us/> and per NRS 232.2176 and 241.020 a link to this agenda has been posted to the State of Nevada website at <https://notice.nv.gov>. To obtain further documentation regarding posting, please contact Tara Aufiero, City Hall, 1 East 1st Street, 7th Floor, Reno, NV 89501; aufierot@reno.gov.

Support Materials: The designated contact to request support materials is Tara Aufiero, 1 East First Street, 7th Floor, 775-333-7751 Support materials are also available at the scheduled meeting.

Order of Agenda: Section titles on this agenda are for convenience and reference purposes and are not intended to define, govern, limit, modify or in any manner affect the titles of the items listed for consideration by the Committee. A time listed next to a specific agenda item indicates that the specific item will not be heard before that time – it does not indicate the time schedule of any other item. Items on the agenda may be removed, postponed, taken out of order and the Committee may combine two or more agenda items for consideration.

Accommodations: Reasonable efforts will be made to assist and accommodate individuals with disabilities attending the meeting. If you require special arrangements for this meeting, please call 334-2350 prior to the date of the meeting.

AGENDA

1. Call Meeting to Order.
2. Roll Call.
3. PUBLIC COMMENT – This item is for either public comment on any action item or for general public comment and is limited to no more than **three (3) minutes** for each commentator.
4. Approval of Agenda. (For Possible Action)
5. Approval of Minutes for August 4, 2021 (For Possible Action)
6. Informational Management Reports from TMWRF Management Team:
 - a. Safety Update – Plant Manager
 - b. Staffing Update – Plant Manager
 - c. FY 22 Budget-to-Actual as of September 30, 2021 – Plant Manager
 - d. The Influent flow split - Plant Manager
 - e. Lab Manager Update
 - f. Ongoing Operations activities including status of processes - Operations Manager
 - g. Ongoing process and chemical optimization – Plant Process Engineer
 - h. Ongoing Maintenance activities - Maintenance Manager
7. Update and discussion regarding compliance with the allowable Total Nitrogen (TN), Total Phosphate (TP) and Total Dissolved Solids (TDS) discharges in accordance with the National Pollutant Discharge Elimination System permit issued by Nevada Division of Environmental Protection (NDEP) by the Plant Manager.
8. Update and discussion on the TMWRF Capital Improvement Program (CIP) progress by the City of Reno TMWRF CIP Program Manager.
9. Update and discussion on the Sewer Allocation Report by the Plant Manager.
10. Update and discussion on the TMWRF Facility Plan by the Plant Manager.

11. Review and approval of the draft 1-Year Capital Improvement Program reallocation for fiscal year 2022 or direction thereon. (For Possible Action)
12. Identification of future agenda items.
13. Discussion and direction regarding setting the next meeting date as February 2, 2022. (For Possible Action)
14. PUBLIC COMMENT – This is for general public comment limited to items that do not appear on the agenda and is limited to no more than **three (3) minutes** for each commentator. Pursuant to NRS 241.020, no action may be taken upon a matter raised under this item until the matter has been specifically included on an agenda.
15. Adjournment. (For Possible Action)

MINUTES

JOINT COORDINATING COMMITTEE (JCC) FOR THE TRUCKEE MEADOWS WATER RECLAMATION FACILITY (TMWRF) Wednesday, August 4, 2021

The Joint Coordinating Committee (JCC) meeting was held at the Truckee Meadows Water Reclamation Facility - Training Center, 8500 Clean Water Way, Reno NV 89502 and conducted the following business:

1. Call Meeting to Order

The meeting was called to order by Chair Martini at 10:05 a.m.

2. Roll Call - A quorum was present.

Committee Members Present

Donald Abbott	Council Member, City of Sparks
Jon Combs	General Manager, SVGID
Wayne Webber (<i>proxy for Cronk</i>)	Budget Manager, City of Sparks
John Flansberg	Public Works Director, City of Reno
John Flansberg (<i>proxy for Thornley</i>)	Public Works Director, City of Reno
John Flansberg (<i>proxy for Lauchner</i>)	Public Works Director, City of Reno
John Martini	Assistant City Manager, City of Sparks
Armando Ornelas	Community Services Director, City of Sparks
Dwayne Smith (<i>proxy for Solaro</i>)	Director of Engineering, Washoe County
Bonnie Weber	Council Member, City of Reno

Members Absent

Deborah Lauchner (<i>proxy present</i>)	Finance Director, City of Reno
Doug Thornley (<i>proxy present</i>)	City Manager, City of Reno
David Solaro (<i>proxy present</i>)	Director of Community Services, Washoe County
Jeff Cronk (<i>proxy present</i>)	Finance Director, City of Sparks

Staff Present

Susan Ball Rothe	Deputy City Attorney, City of Reno
Kerri Lanza	Engineering Manager, City of Reno
Matt Smith	Associate Civil Engineer, City of Reno
Trina Magoon	Public Works Assistant Director, City of Reno
Emily Kidd	Internal Auditor, City of Reno
Michael Drinkwater	TMWRF Plant Manager, City of Sparks
Rick Breese	TMWRF Operations Manager, City of Sparks
Kim Laber	TMWRF Maintenance Manager, City of Sparks
Casey Mentzer	TMWRF Process Engineer, City of Sparks
Chris Melton	Public Works Director, Sun Valley GID

3. Public Comment

None

4. Approval of Agenda (For Possible Action)

IT WAS MOVED BY MEMBER FLANSBERG, SECONDED BY MEMBER COMBS, TO APPROVE THE AGENDA. THE MOTION CARRIED UNANIMOUSLY.

5. Approval of Minutes for May 5, 2021 (For Possible Action)

IT WAS MOVED BY MEMBER FLANSBERG, SECONDED BY MEMBER WEBER, TO APPROVE THE MINUTES. THE MOTION CARRIED WITH ONE (1) ABSTENTION BY MEMBER ORNELAS.

6. Nomination and election of Chair for the Fiscal Year 21/22 (For Possible Action)

IT WAS MOVED BY CHAIR MARTINI, SECONDED BY MEMBER WEBER, TO ELECT MEMBER FLANSBERG AS CHAIR. THE MOTION CARRIED UNANIMOUSLY.

7. Informational Management Reports from TMWRF Management Team:

a. Safety Update – Plant Manager

Paul Shapiro, TMWRF Safety Coordinator, reported that there were 21 reported incidents for this calendar year with 4 of those being recordable incidents. Top deck coating and concrete repairs, especially on stairs, will help to improve safety.

b. Staffing Update – Plant Manager

One new employee was introduced. There are 7 current vacancies. Two employees are on extended FMLA. Two employees are currently out on COVID quarantine.

c. FY 21 Unaudited End of Year Budget as of June 30, 2021 – Plant Manager

Michael Drinkwater, TMWRF Plant Manager, reviewed the summary sheet included in the meeting packet.

d. The Influent Flow Split – Plant Manager

Mr. Drinkwater reviewed information included in the meeting packet regarding the flows.

e. Lab Manager Update

Amy Egan, TMWRF Lab Manager, provided an update on lab activities for the Aqua Nereda Pilot Test.

f. Ongoing Operations activities including status of processes – Operations Manager

Rick Breese, TMWRF Operations Manager, discussed a new piece of equipment being used called a sand eductor that has helped the process. Operations has also been working closely with Matt Smith on the CIP projects. Aeration tank inspections are going well with no process upsets. Overtime is being used to cover shifts while they are still not fully staffed.

g. Ongoing process and chemical optimization – Plant Process Engineer

Casey Mentzer, TMWRF Process Engineer, reported on bio solids hauling noting that it is reflective of the change in how we process our sludges. There has been an increase in chemical costs due to issues with the supply chains. Mr. Mentzer reported on efforts to address the increased costs.

h. Ongoing Maintenance activities including status of work orders completion – Maintenance Manager

Kim Laber, TMWRF Maintenance Manager, reported on the status of mechanical and electrical work orders. He is hopeful that they will be able to hire some replacement electricians before the end of this fiscal year.

i. Update regarding asset data management – Maintenance Manager

Mr. Laber reported on the Asset Replacement Budget and the status of encumbered funds. He has encumbered \$639,639 out of the budget of \$660,000 leaving \$20,361.

8. Update and discussion regarding compliance with the allowable Total Nitrogen (TN), Total Phosphate (TP) and Total Dissolved Solids (TDS) discharges in accordance with the National Pollutant Discharge Elimination System permit issued by Nevada Division of Environmental Protection (NDEP) - Plant Manager.

Mr. Drinkwater reviewed information included in the report regarding compliance with the allowable Total Nitrogen (TN), Total Phosphate (TP) and Total Dissolved Solids (TDS) discharges in accordance with the National Pollutant Discharge Elimination System permit.

9. Update and discussion on the TMWRF Aerobic Granular Sludge Pilot Project (Aqua Nereda) - City of Reno TMWRF CIP Program Manager.

Matt Smith, Associate Civil Engineer, City of Reno, reported on the status of the pilot project. Most operating parameters and effluent criteria that were agreed upon at the start of the pilot have been met, with the exception of the Mixed Liquor Suspended Solids and ammonia concentrations. Aqua Aerobics Systems, Inc. (AASI) has agreed to a no cost extension of the pilot unit through February 2022.

10. Update and discussion on the TMWRF Capital Improvement Program (CIP) progress - City of Reno TMWRF CIP Program Manager.

Mr. Smith reviewed the current status of the TMWRF CIP. There are fourteen engineering projects and evaluations and two CIP construction projects currently underway. The status of Capital Project funding was also included in the report and discussed. All of the projects are progressing on time and within budget.

11. Identification of future agenda items.

Member Flansberg requested a future agenda item for a report on sewer allocations.

12. Discussion and direction regarding setting the next meeting date as October 6, 2021. (For Possible Action)

There was discussion regarding conflicts with the October 6 meeting date.

IT WAS MOVED BY MEMBER ORNELAS, SECONDED BY MEMBER MARTINI, TO SET THE NEXT MEETING DATE FOR NOVEMBER 3, 2021. THE MOTION CARRIED UNANIMOUSLY.

13. Public Comment

None

14. Adjournment (For Possible Action)

The meeting was adjourned at 11:07 a.m.

Respectfully submitted by,
Christine Birmingham, Recording Secretary

Agenda Item #6
November 3, 2021

TO: Joint Coordinating Committee (JCC)

FROM: Michael Drinkwater, P.E., Treatment Plant Manager
City of Sparks

DATE: November 3, 2021

RE: Manager's Informational Report

1. Informational Management Reports from TMWRF Management Team:
 - a. Safety Update – Safety Officer
 - b. Staffing Update – Plant Manager
 - c. FY 21 Unaudited Budget to Actual as of Sept 30, 2021
 - d. The Influent flow splits
 - e. Lab Update
 - f. Ongoing Operations activities including status of process-Operations Manager
 - g. Ongoing process and chemical optimization – Plant Process Engineer
 - h. Ongoing maintenance activities – Maintenance Manager

TMWRF Operations Costs - FY22 Budget to Actual Unaudited

9/30/2021

	FY22 Budget	FY22 Actuals (thru 09/30/21)	Remaining Budget	% Used
--	-------------	---------------------------------	---------------------	-----------

Salaries

Base Salaries	4,492,791	981,366	3,511,425	22%
Longevity	90,378	2,333	88,045	3%
Overtime/Premium Pays*	697,658	163,701	533,957	23%
Leave Bank adjustments & cash outs	136,200	92,568	43,632	68%
Other Salaries	0	0	0	#DIV/0!
Total Salaries	5,417,027	1,239,968	4,177,059	23%

Benefits

Retirement - PERS	1,363,207	307,784	1,055,424	23%
Health Insurance	1,083,809	307,705	776,104	28%
Cell Phone, D/C Match, Tuition, Uniform	49,149	34,422	14,727	70%
Non-contractual Benefits**	243,539	51,954	191,585	21%
Total Benefits	2,739,705	701,864	2,037,840	26%

Discretionary Services & Supplies

Chemicals (Budget <i>excludes</i> \$300K Contingency)	4,351,100	1,087,718	3,263,382	25%
Maintenance and Repairs	2,013,506	248,616	1,764,889	12%
Operating Supplies	1,453,477	210,713	1,242,764	14%
Biosolds Hauling (Budget <i>includes</i> \$155K Contingency)	1,367,549	262,175	1,105,374	19%
Professional Services (includes temp agency costs)	978,453	90,270	888,183	9%
Other Discretionary Services & Supplies	833,856	153,340	680,516	18%
Total Discretionary Services & Supplies	10,997,941	2,052,833	8,945,108	19%

Non-Discretionary Services & Supplies

Electricity	2,175,000	399,343	1,775,657	18%
Common Service Charge	677,995	169,498	508,497	25%
General Insurance Premium	418,715	517,008	(98,293)	123%
Other Non-discretionary Services & Supplies	222,664	58,338	164,326	26%
Total Non-Discretionary Services & Supplies	3,494,374	1,144,188	2,350,187	33%

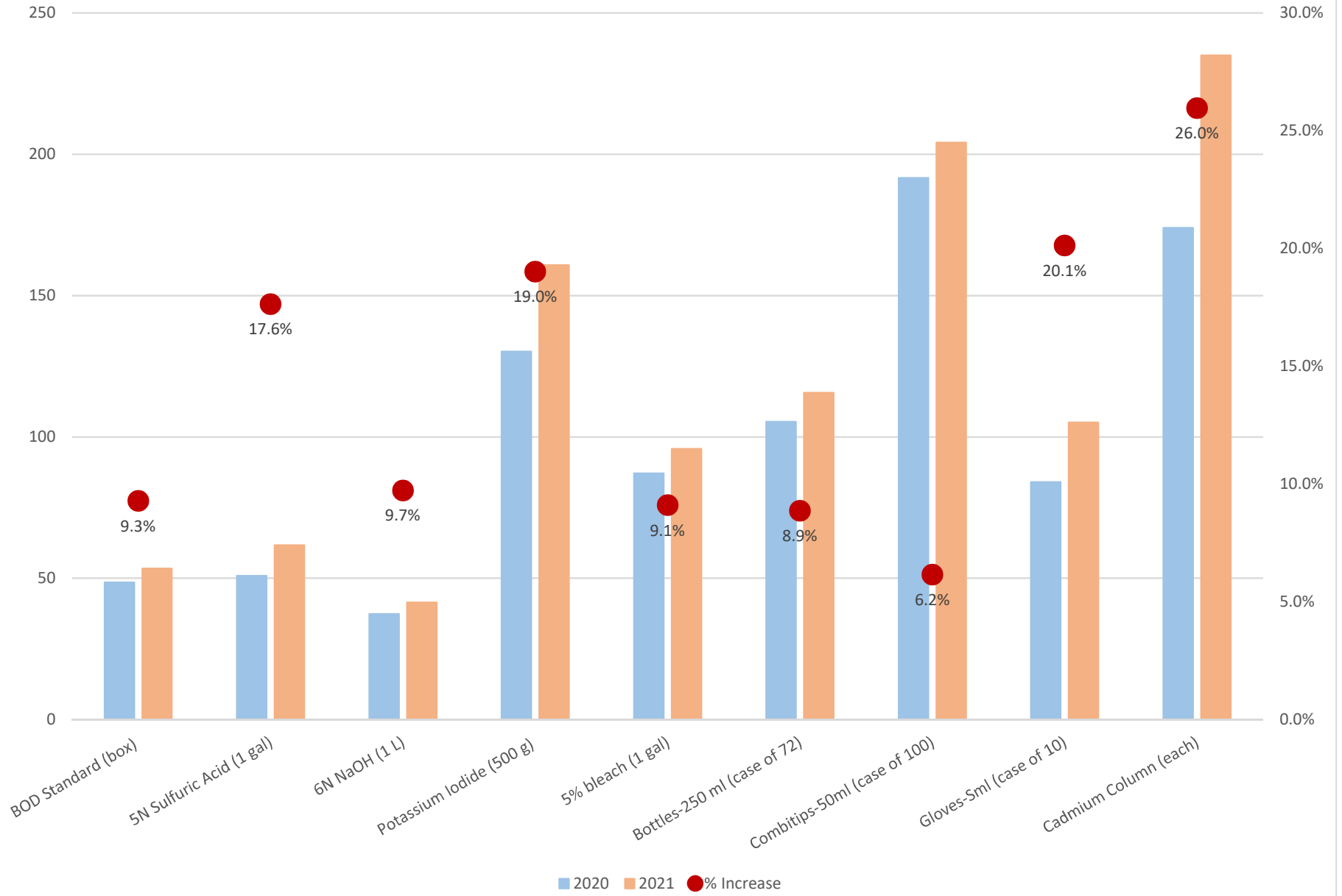
Capital Outlay (managed by TMWRF staff)

Capital Outlay (Budget <i>excludes</i> \$1M Contingency)	1,139,589	30,727	1,108,862	3%
Total Capital Outlay	1,139,589	30,727	1,108,862	3%
Total	23,788,636	5,169,580	18,619,056	22%

* Overtime/Premium Pays include Overtime Callback, Worked Holiday, Standby and Night Differential

** Non-contractual Benefits includes Medicare, Workers Comp, Unemployment and OPEB

Laboratory Cost Comparison - 2020 to 2021



TMWRF Operations - Process Performance Metrics

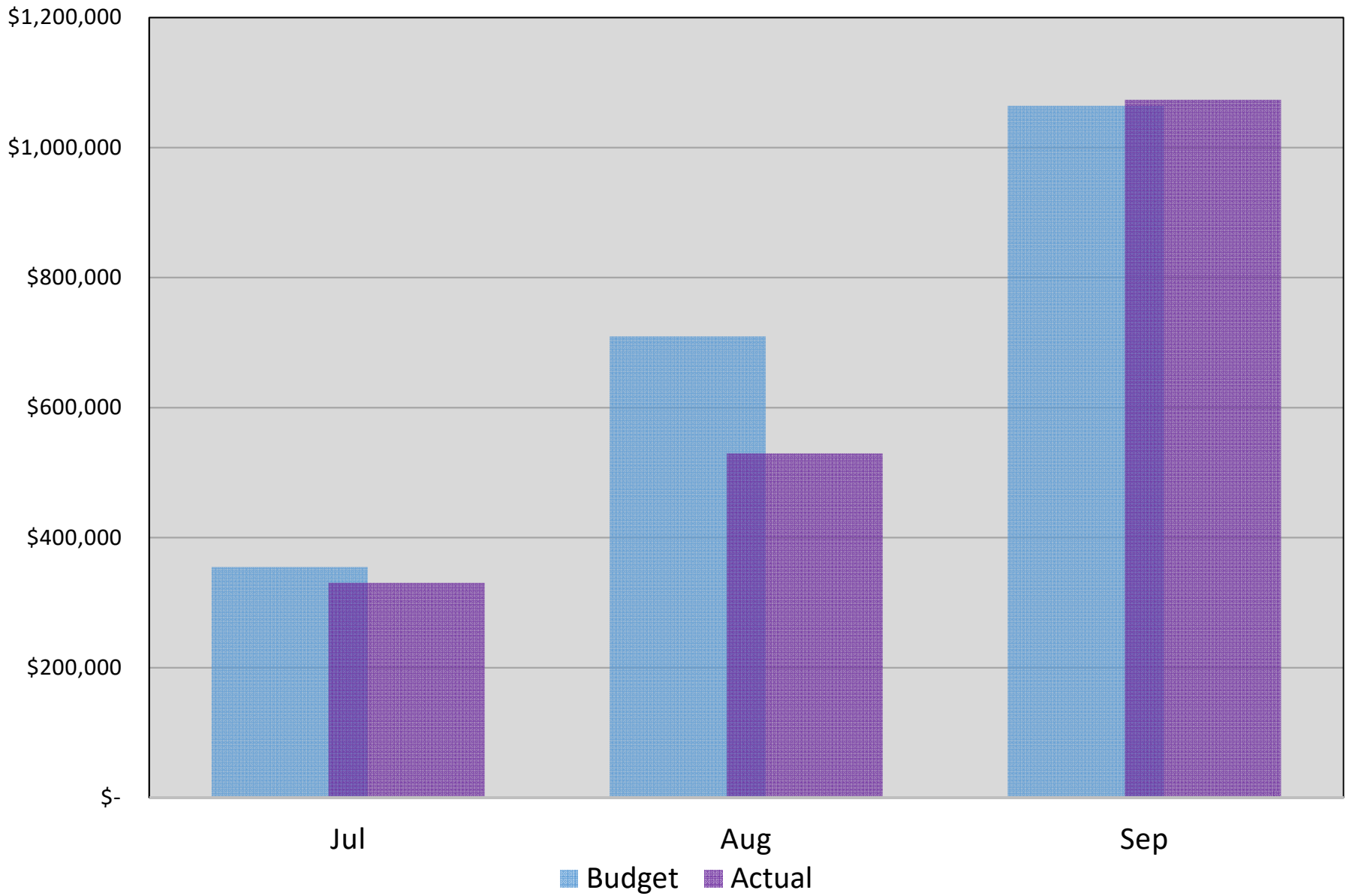
Process Area	Criterion	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21
Primary	> 55% Solids Removed	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Aeration	OP < 0.2 mg/L	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Secondary	TSS < 30 mg/L, OP < 0.4 mg/L	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Nitrification	NH ₃ < 0.5 mg/L	Failed	Failed	Compromised	Failed	Failed	Stable	Stable	Stable	Compromised
Denitrification	NO ₂ +NO ₃ < 0.2 mg/L	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Plant Effluent	< 90% of Permitted Value	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Failed
Reuse	< 90% of Permitted Value	Stable	Failed	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Primary Sludge Thickening	TS > 2.75%	Stable	Stable	Compromised	Stable	Stable	Compromised	Stable	Stable	Stable
Secondary Sludge Thickening	TS > 4%	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable
Digestion	Volitile Solids < 75%	Stable	Stable	Stable	Compromised	Stable	Stable	Stable	Stable	Stable
Dewatering	Biosoilds TS > 16%	Stable	Stable	Stable	Stable	Compromised	Stable	Stable	Stable	Stable
Gas Conditioning	H ₂ S < 254 ppm	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable

 Stable

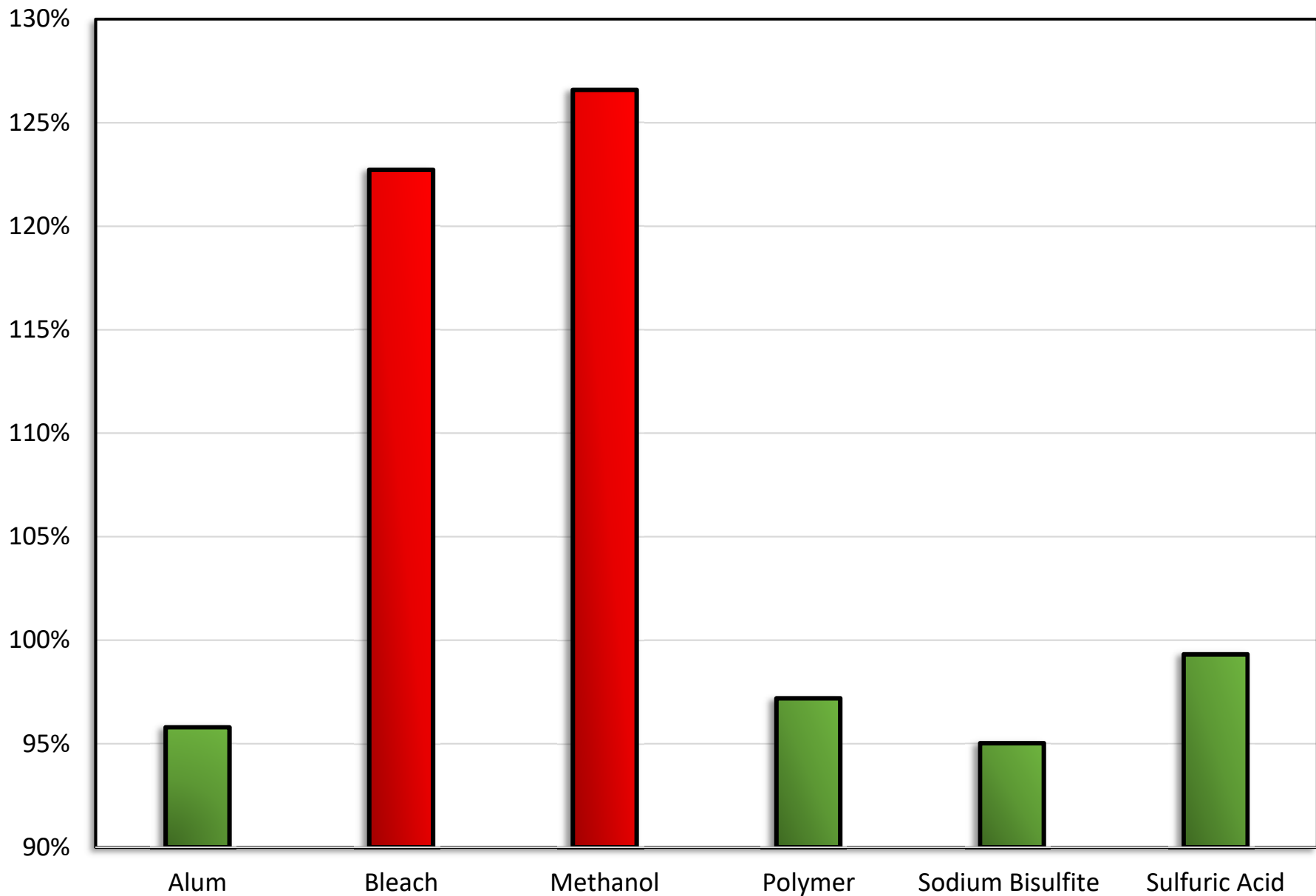
 Compromised

 Failed

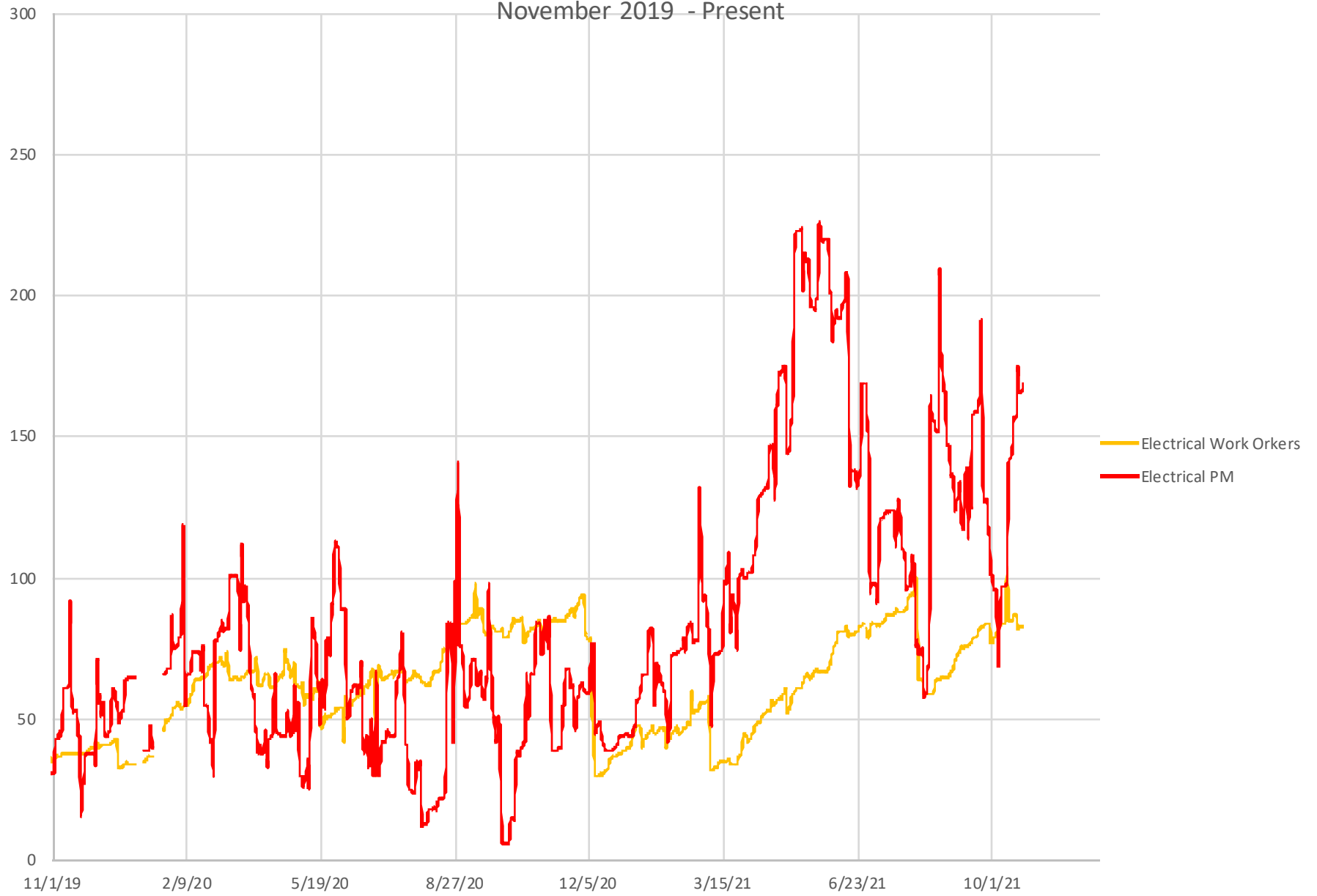
FY22 Total Bulk Chemical Budget to Actuals (\$)



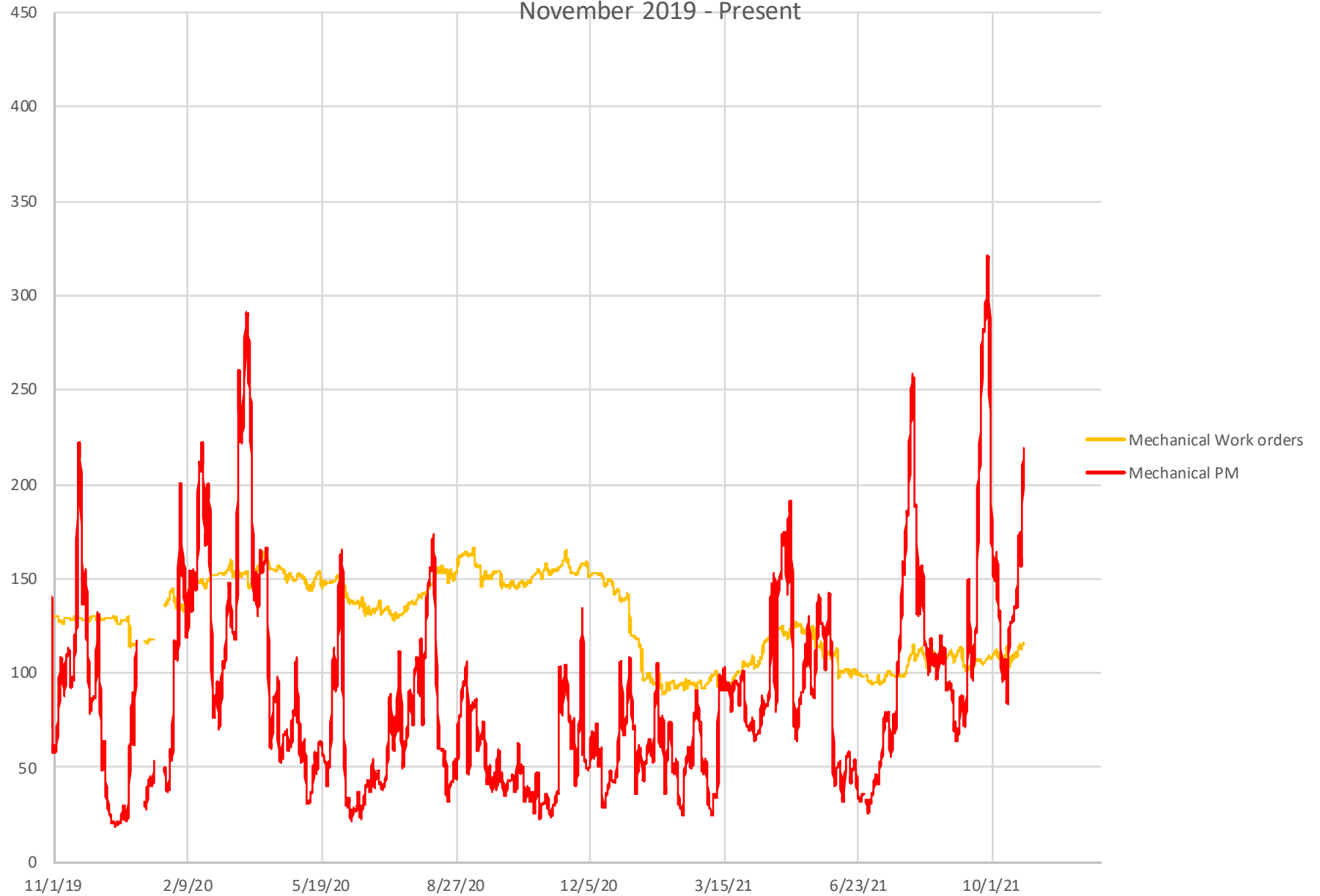
TMWRF Process Chemicals --Unit Cost Actual to Estimated for FY22



TMWRF Past-Due Electrical Work Orders
November 2019 - Present



TMWRF Past-Due Mechanical Work Orders
November 2019 - Present



FY 2022 Asset Management Proactive Replacement

Asset ID	Description	Cost	In progress
COL22002	Grit tank collector 2 / South	\$30,000.00	
MTR32071	HVR Transfer Motor		
PMP32071	HVR Transfer Pump	\$27,000.00	X
	Poly bleach lines	\$33,000.00	
XFR65605	Lab transformer replacement	\$7,000.00	X
MTR15501	Blower 1 motor rehab - 72K hrs	\$20,000.00	X
MTR15504	Blower 4 motor rehab - 62K hrs	\$20,000.00	
CPL15501	Blower 1 CPL replacement	\$43,000.00	X
CPL15502	Blower 2 CPL replacement	\$43,000.00	X
CPL15503	Blower 3 CPL replacement	\$43,000.00	X
CPL15504	Blower 4 CPL replacement	\$43,000.00	X
CPL15617	Blower 1-4 MCP replacement	\$35,000.00	X
Total		\$344,000.00	
Budget	340,000		

|

Agenda Item #7
November 3, 2021

TO: Joint Coordinating Committee (JCC)

FROM: Michael Drinkwater, P.E., Treatment Plant Manager
City of Sparks

DATE: November 3, 2021

RE: Update and discussion regarding compliance with the allowable Total Nitrogen (TN), Total Phosphate (TP) and Total Dissolved Solids (TDS) discharges in accordance with the National Pollutant Discharge Elimination System permit issued by Nevada Division of Environmental Protection (NDEP) by the Plant Manager.

Figure 1 - TMWRF Cumulative Total Nitrogen Discharge for Selected Years

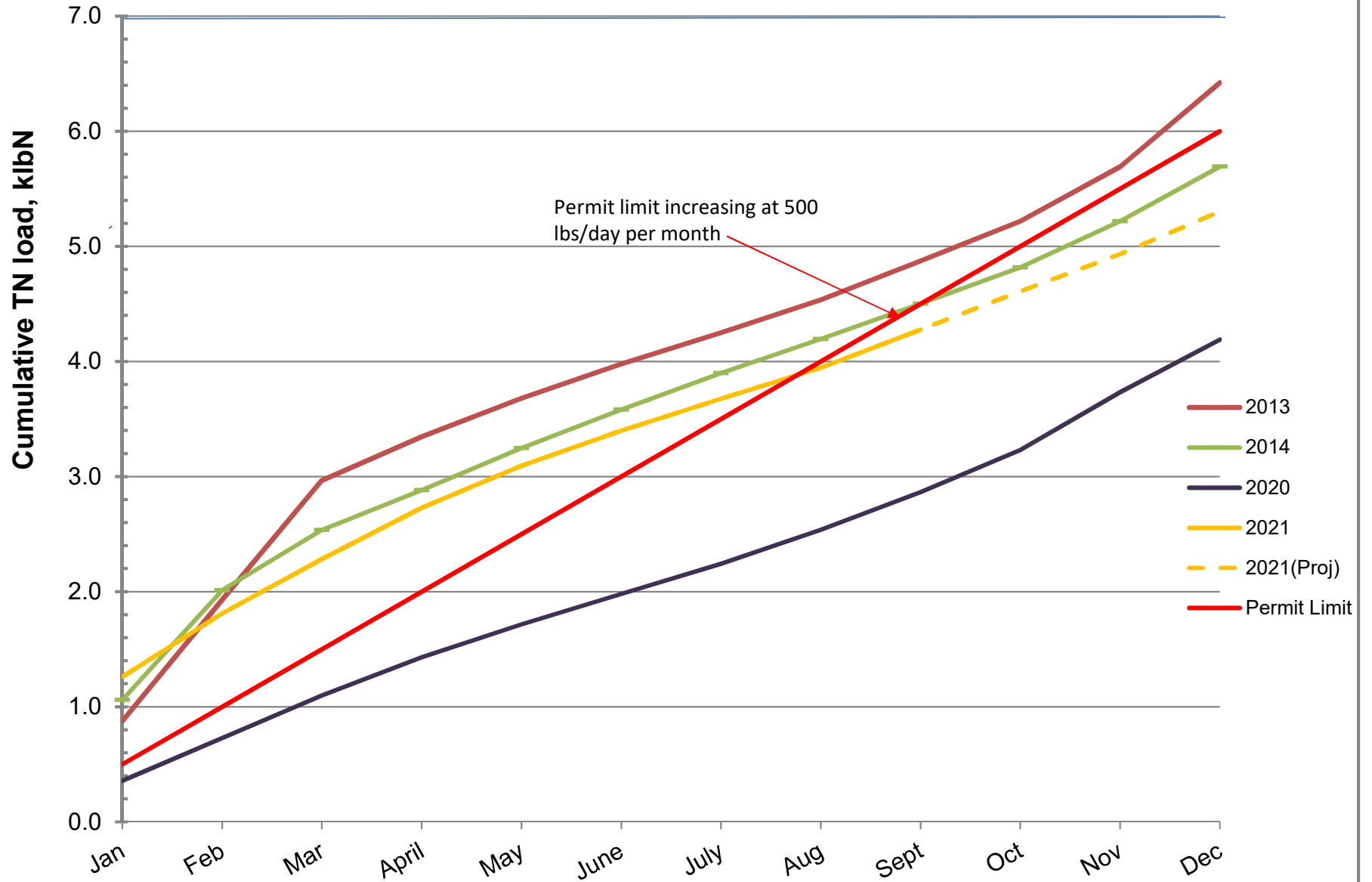


Figure 2 - TMWRF Cumulative Total Phosphorus Discharge 2019-2021

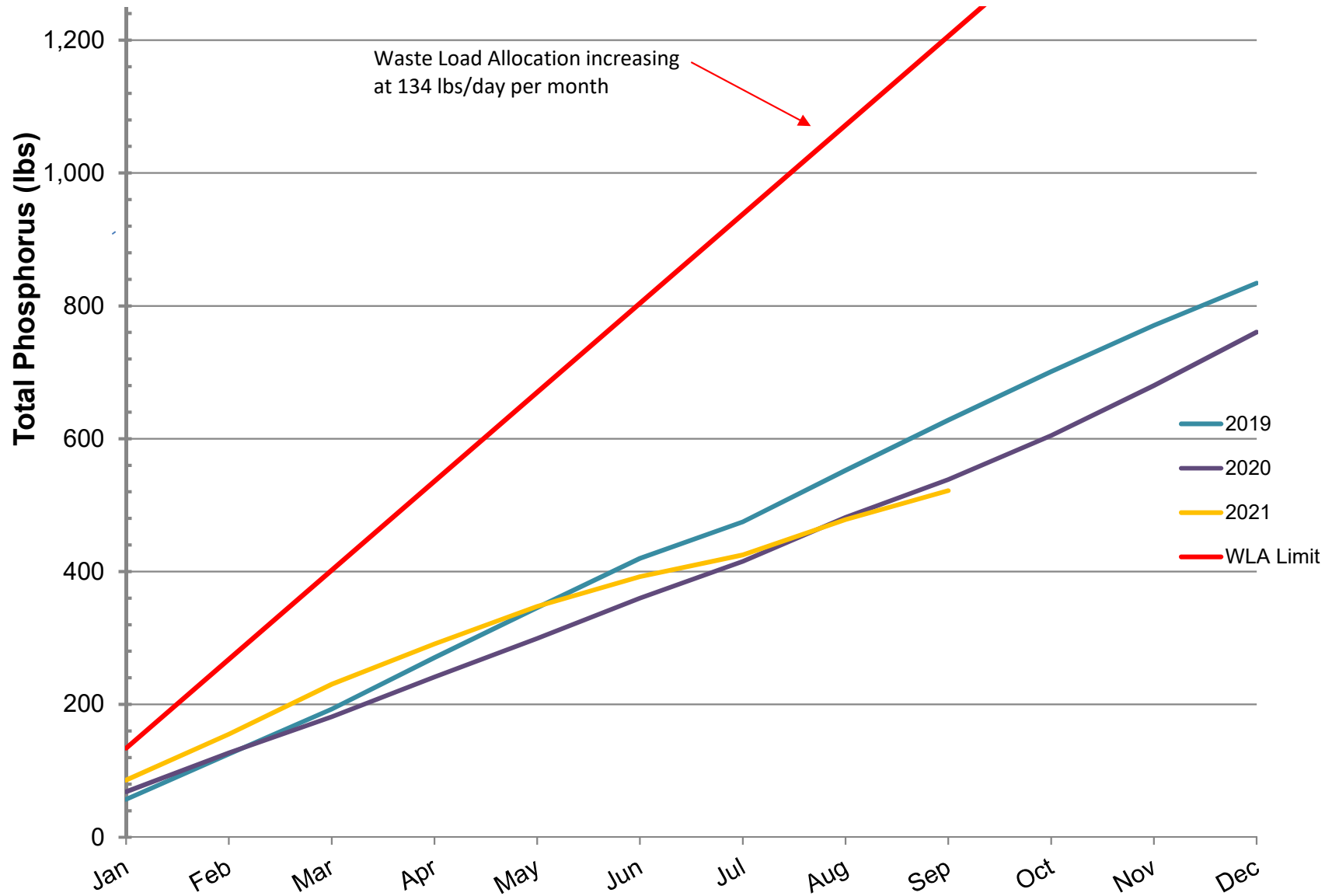


Figure 3 - TMWRF Effluent Phosphorus Concentration by Month 2019-2021

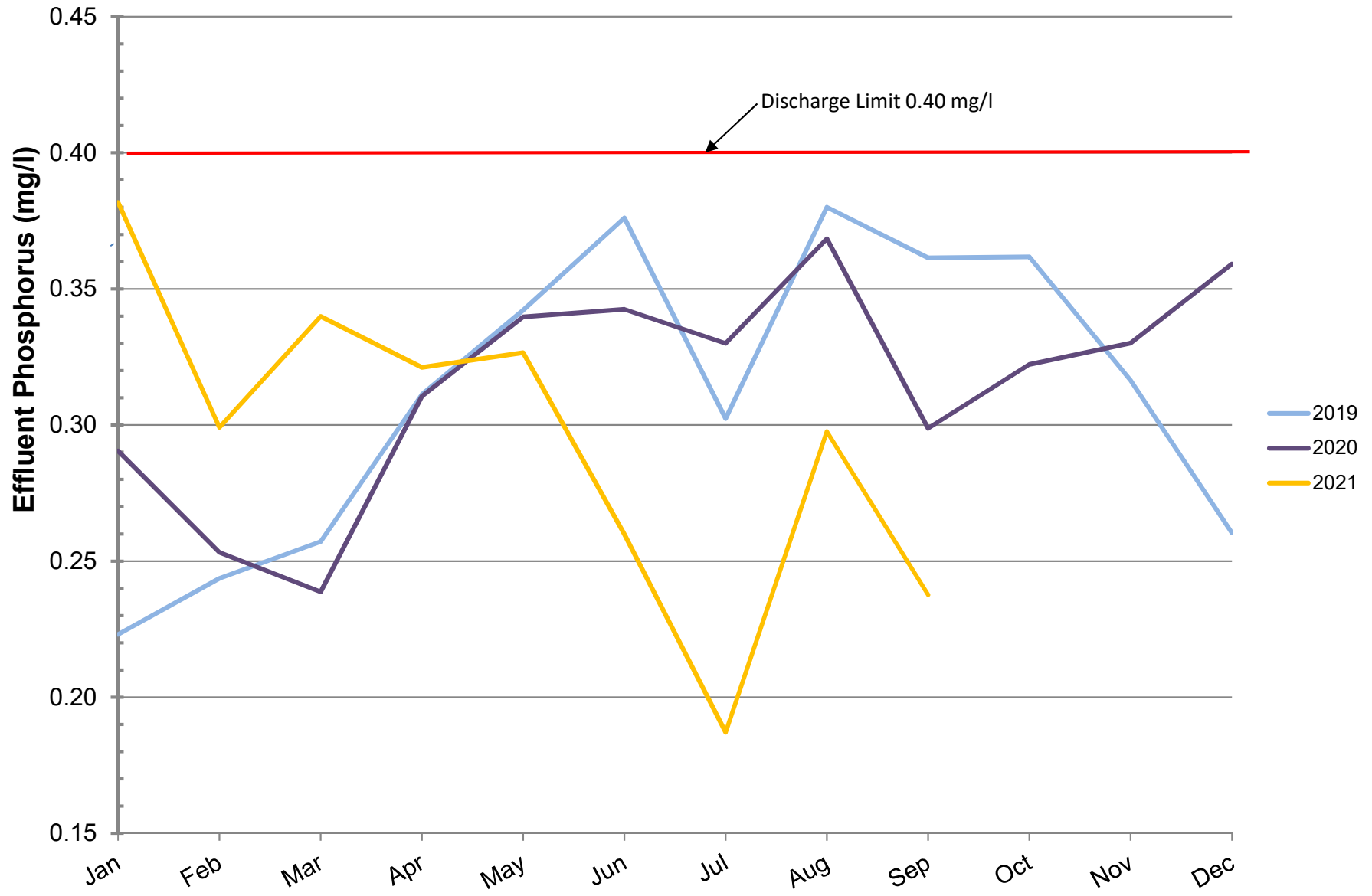


Figure 4 - TMWRF Cumulative Total Dissolved Solids Discharge 2019-2021

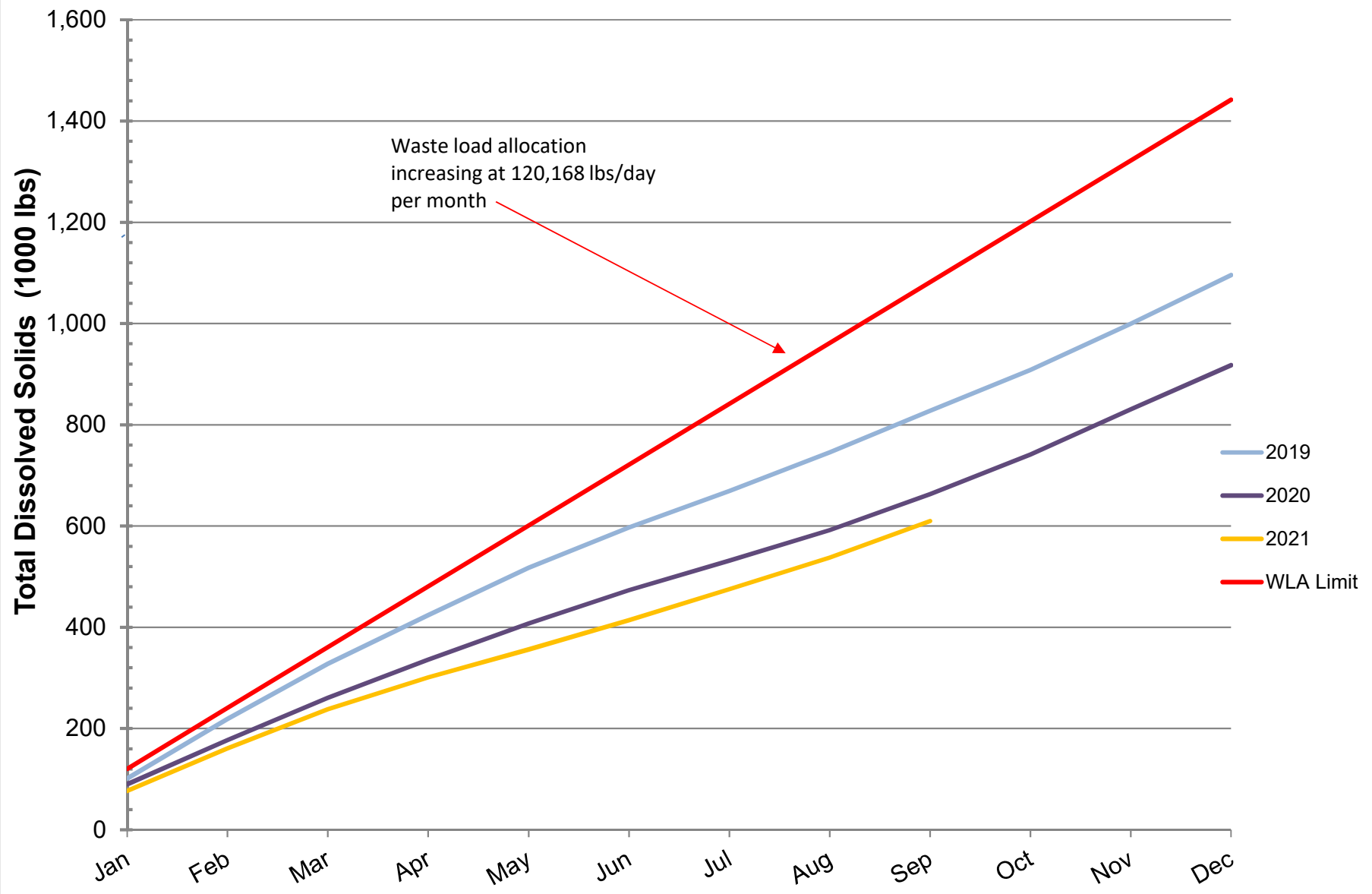
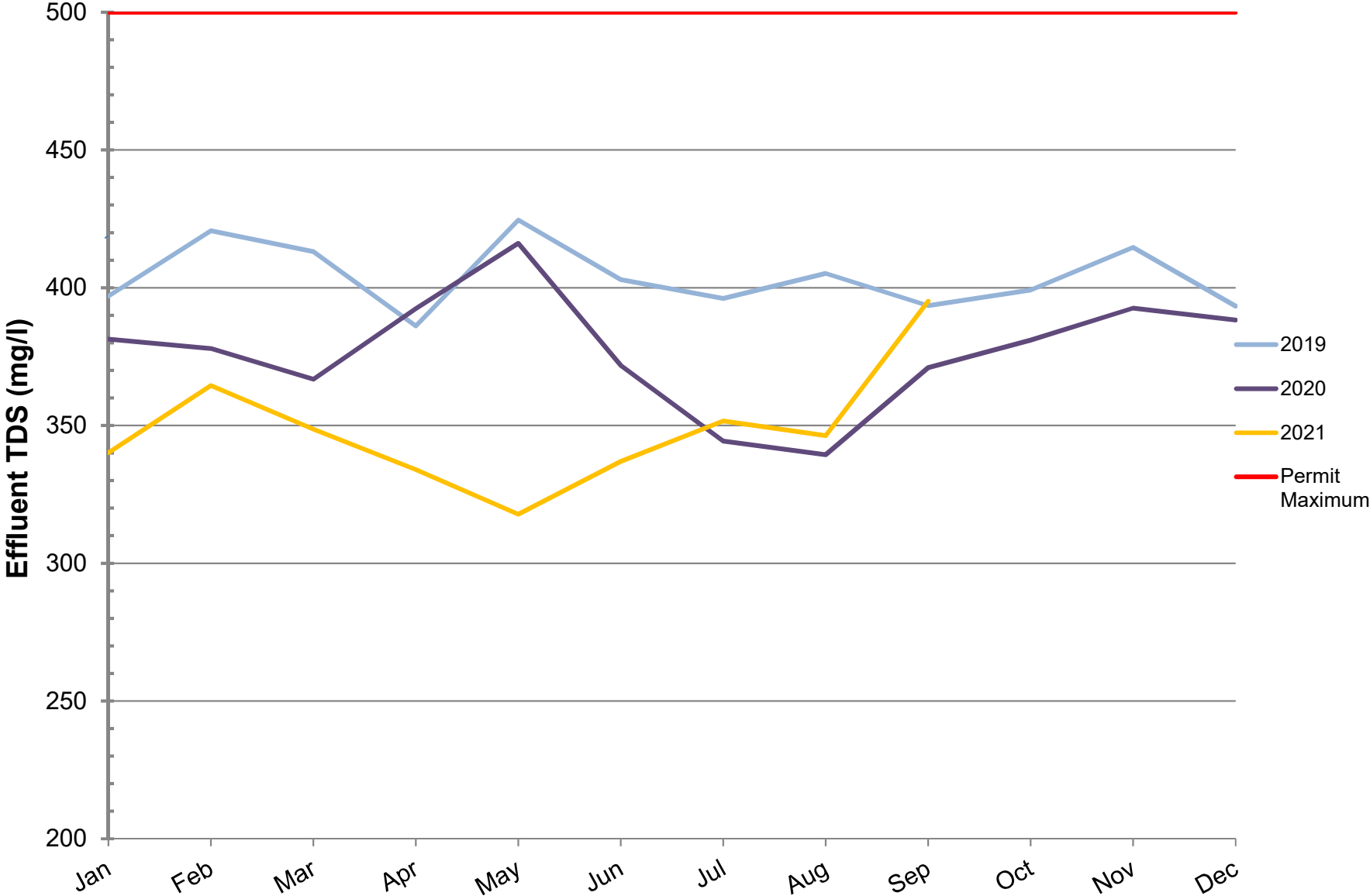


Figure 5 - TMWRF Effluent Total Dissolved Solids Concentration by Month 2019-2021



Agenda Item #8
November 3, 2021

TO: Joint Coordinating Committee (JCC)

FROM: Matt Smith, P.E., Associate Civil Engineer--City of Reno Utility Services
Department

DATE: November 3, 2021

RE: Update of the TMWRF Capital Improvement Program (CIP) projects

TMWRF Capital Improvement Program Update Summary:

All approved projects are progressing on-time and within budget. The dewatering pilot project had some issues while the equipment was on-site, and staff is actively seeking a solution. The AC Paving Project contractor accidentally cut power to a Motor Control Center (MCC) and staff was quick to rectify the solution. A temporary fix has been made and a permanent solution will be completed soon.

TMWRF Capital Improvement Program Project Updates:

Twelve engineering projects and evaluations are underway:

- Centrifuge Number 1, Cake Pump Number 1, and Dewatering Facility Improvements: This project is under consideration for progressing. The centrifuge pilot test yielded unfavorable results, specifically, the performance of the centrifuge was worse than the plant's current centrifuges.
- Effluent Reuse Pump Station Project (Design): The project team has submitted the 100% drawings and specifications. The project is set to advertise this winter pending the reallocation of the FY2022 CIP.
- Aerobic Granular Sludge Pilot Project: The pilot trailer is on-site and has been operating since mid-January. The agreement for the pilot trailer has been amended for a no-cost extension to gather additional data.
- Aerobic Granular Sludge Pilot Project Assistance: HDR has been helping to provide insights into testing parameters and general operational recommendations.
- Bleach Building HVAC: 100% plans were submitted and the project is set to bid before the end of the calendar year.

Agenda Item #8

November 3, 2021

Page 2

- Gas Conditioning System Improvements Pre-Design: This project is underway. Stantec is working to determine existing conditions to provide recommendations for improvements. This project is on time and within budget.
- Sludge Drying Bed Preliminary Engineering: The final technical memorandum is nearing completion. This project is on time and within budget.
- Secondary Clarifier 2A Improvements: This project is on time and within budget, and forecasted to advertise in the spring of 2022.
- TWAS Short-Term Improvements Project: This project is underway. Data collection and preliminary modeling has been the focus thus far with construction to occur next fiscal year (FY23).
- Nitrification Tower #1 Rehabilitation Project: A kickoff meeting and site evaluation is scheduled in the next two weeks. This project is on-time and within budget.
- Aeration Tank Evaluation and Improvements: This project is progressing on time and within budget. The project team shut down three of the five aeration tanks and visually inspected these prior to the colder season. The consultant is drafting a preliminary report with recommendations to repair the tanks.
- Electrical Systems and Expansion Study: This project has started. The kickoff meeting was held on October 14th.

Three CIP construction projects are underway:

- Raw Sewage Pump Switchgear and LVDC1-A Rehabilitation Project: Construction is nearing final completion. This project is on time and within budget.
- AC Paving Phase 1: A contract was awarded to Spanish Springs Construction and they have started the work. There are several unanticipated utility conflicts; however, the project is continuing with good progress
- MCC 16 and 17 Replacement Project: This project was approved at Reno City Council on October 27th. If approved by the Sparks City Council, the project will commence in early December this year.

TMWRF Capital Improvement Program Completed Projects Update:

Agenda Item #8

November 3, 2021

Page 3

There have been no construction projects completed since the last JCC meeting.

Four engineering projects have been completed since the last JCC meeting.

- Odor Control Project: The preliminary engineering report has been submitted and this project has been completed. The focus on this project has shifted, and we are engaging the consultant in another agreement to analyze a new technology.
- NVEnergy Natural Gas Pipeline Discovery: Three separate routes from NVE's natural gas system were analyzed and planning level costs were identified. The costs ranged from ~\$1 Million to ~\$1.6 Million. This project is not being pursued at this time.
- MCC 16 & 17 Design Project has been completed.
- Centrifuge Pilot RFP and Testing: This project has been completed. Results were shared with TMWRF staff. This project is currently under consideration for more piloting.

Status of Capital Project Funding:

Total authorized funding for open projects:	\$21,164,453
Authorized funding encumbered (as of October 31, 2021)	\$7,236,798
% Total authorized funding encumbered:	33% (+2%)
Encumbered funding expended (as of October 31, 2021):	\$3,695,528
% Total encumbered funding expended:	53% (+13%)

Total authorized funding encumbered includes projects that were approved in previous fiscal years that are still open. Projects that indicated on the currently approved budget and consistent with the results of the Paired Comparison/Risk Ranking were progressed and subsequently encumbered. The results of the Paired Comparison/Risk Ranking are presented at the end of this report, and a reallocation is included as a separate, but related item.

TMWRF Treatment Process Risk Registry and Risk Mitigation Priorities

Cities of Reno and Sparks
 July 15th, 2021

Paired Comparison Worksheet

Sorted by Rank

Rank	Description	Encumbered	Year
1	Third Centrifuge, Cake Pump, and Polymer Improvements	Yes	FY21
2	Effluent Reuse Pump Station Rehabilitation	Yes	FY21
3	Gas Conditioning System Improvements (Chiller, Drainage, raw gas flare piping, etc.)	Yes	FY21
4	Digester #4 Cover	No-Reallocation	FY22
5	Filter Building Bypass/Evaluation/UV Study	No-Reallocation	FY22
6	Aeration Piping Improvements (looping, repair, etc.)	No	
7	Bleach Building HVAC Rehabilitation Project	Yes	FY21
8	Digester 5 Evaluation & Design	No	
9	TWAS Short Term Improvements	Yes	FY21
10	MCC Replacement	Yes	FY22
11	Heat Loop System Improvements	No	
12	Aeration Tank Rehabilitation Project	No	
13	Roofing Replacement	No	
14	Activated Sludge Hydraulic Controls	No	
15	Gallery HVAC	No	
16	Digester #1 Control Building HVAC (Electrical Room)	No	
17	Nitrification Tower Rehabilitation Project	Yes	FY21
18	Buried Pipe Condition Assessment Phase 1 (Primary Influent Pipes 2A, 2B, 2C)	No	
19	Grit Facility Improvements	No	
20	Buried Gas Piping Replacement & Improvements	No	
21	Blower Building Air Intake	No	
22	Gravity Thickener Rehabilitation	No	
23	Septage Receiving Improvements - new Septage unit	No	
24	Internal Drainage Infrastructure Rehab	No	
25	Post Air Tank Rehab	No	
26	NVEnergy Natural Gas Line	No	
27	Denitrification Traveling Screens Fire System Decoupling	No	
28	Sludge Drying Beds Improvements Project	No	
29	RAS System II & III	No	

Table 1: FY21 Paired Comparison/Risk Ranking (July 2021) vs. Current CIP Progress

Discussion:

Staff is presenting this report to the Committee for information and discussion.

Agenda Item #9
November 3, 2021

TO: Joint Coordinating Committee (JCC)

FROM: Michael Drinkwater, P.E., Treatment Plant Manager
City of Sparks

DATE: November 3, 2021

RE: Update on current Sewer Allocation

The land development process in Reno and Sparks require the respective city to commit to provide sewer service to the proposed development before construction begins. Consequently, there can be several years between the commitment to serve and actual wastewater flowing from the development. It is necessary to accurately assess this unrealized flow in order to ensure the treatment plant has sufficient capacity to remain in compliance with discharge limits. The treatment capacity available to serve future development is the capacity that remains after accounting for actual flow and committed but unrealized flow.

The current breakdown of TMWRF capacity is shown in Table 1. When estimating flow from future development, both Reno and Sparks use 175 gallons/day as the average sewerable water flow from a single family home. Consequently, 1 MGD is equal to approximately 5,700 single family homes.

Table 1 – Current TMWRF Committed Capacity by city (MGD)

TMWRF Permitted Capacity	44.0			
	Reno		Sparks	
Capacity Owned by each city	30.20	68.63%	13.80	31.37%
Current Flow (24 month rolling avg.)	18.44		10.97	
Flow Commitments				
<i>Will Serve</i>		1.51		0.847
<i>Plan Review</i>		0.20		0
<i>Leased Capacity¹</i>		0		0.897
<i>Reno-Stead WRF Flow Shave²</i>		0.50		0
Total Committed Capacity	2.21		1.74	
Remaining uncommitted capacity	9.55		1.09	

¹The total capacity leased by Sparks is 2.88 MGD. The 0.897 MGD is the portion of that which is currently not utilized.

²The RSWRF Flow Shave to TMWRF is intermittent and currently not being used. It is expected to be permanently discontinued upon the completion of the RSWRF Effluent Disposal Project

TMWRF will utilize a variety of discharge locations in order to accommodate the current and expected future flows up to the permitted limit. Utilizing new, advanced treatment processes, the Truckee River discharge could be increased to a maximum of 40 MGD. However, it is likely more cost effective to pursue effluent reuse as an alternative to the river discharge. The various discharges and expected volumes are shown in Table 2, below.

Table 2 – Current and potential effluent discharge locations

Discharge Location	Volume (Million gallons per day)
Truckee River Discharge	34
Current Effluent Reuse (e.g. UNR Farms, parks, golf courses)	4
TRI-GID effluent reuse	3.6
<i>Sub- Total</i>	<i>41.6</i>
Potential Future Discharges	
Palomino Valley Irrigation	2
Future Treatment/Reuse	1
Total	44.6

Agenda Item #10
November 3, 2021

TO: Joint Coordinating Committee (JCC)

FROM: Michael Drinkwater, P.E., Treatment Plant Manager
City of Sparks

DATE: November 3, 2021

RE: Update on the TMWRF Facility Plan

The TMWRF Facility Plan was completed in October, 2020. This plan was prepared to identify necessary facility improvements in order to meet current and future flows up to the permit limit of 44 Million Gallons per Day (MGD). The plan projects two paths forward for TMWRF: 1) continuing to utilize conventional activated sludge and 2) using an aerobic granular sludge process for future plant expansions. A Capital Improvement Plan was prepared for each option.

TMWRF is currently pilot testing a granular sludge process to validate the effectiveness of that process and determine basic design parameters. The results of this pilot test will help determine which of the two paths is more appropriate for TMWRF.

However, during the development of the plan, process changes at TMWRF provided a significant reduction in the effluent total nitrogen. After a suitable period to confirm this reduction was stable, a revision to the projected effluent character and subsequent capital improvement plans was warranted. The revised Capital Improvement Program was completed in August, 2021.

The improvement in effluent quality resulted in several significant changes to the CIP, including:

- Dissolved Organic Nitrogen (DON) Removal System flow trigger increased from 34 MGD → 37 MGD
- Advanced Treatment Facility 38 MGD → 39 MGD
- Side-stream nutrient removal eliminated for the granular sludge option.
- TWAS dewatering building changed to new combined sludge dewatering building
- Elimination of the proposed Nitrification Trickling Filter No. 7

The next steps are for plant staff, possibly with consultant assistance, to continue to evaluate new technology to refine proposed improvements with the intent of delaying/ or reducing the size or cost. These investigations may include:

- Cloth filters in lieu of dual media filters
- Hydro cyclones to investigate granular sludge in the existing reactors
- UV Transmissivity data to determine design criteria

Agenda Item #11
November 3, 2021

To: Joint Coordinating Committee (JCC)

From: Matt Smith, P.E., Associate Civil Engineer--City of Reno Utilities Services
Department

Date: November 3, 2021

Re: Review and approval of the Draft 1-Year Capital Improvement Program
reallocation for fiscal year 2022 or direction thereon. (For Possible Action)

Staff completed the Paired Comparison Risk/Ranking analysis, and have been actively discussing the results of the TMWRF Facility Plan. The TMWRF CIP Manager (Matt Smith) will lead a discussion on a proposed reallocation of projects and funding, and on updated project cost estimates for a variety of projects.

Staff seeks direction and possible approval of the Draft TMWRF FY22 1-Year CIP Reallocation.

TMWRF FY2022 1-Year Capital Improvement Program Summary
Replacement and Rehabilitation of TMWRF Infrastructure Systems
for Review and Possible Approval at the November 3, 2021 Joint Coordinating Committee Meeting

Facility Plan Recommendation Project

7/15/2021 Risk Rank	Process: Description of Activity	FY22	Δ	Total Reallocation
N/A	Basin Concrete and Steel Rehabilitation (Design/Construction)	\$591,000	\$0	\$591,000
17	Nitrification Tower Rehabilitation & Improvements (Design/Construction)	\$5,000,000	(\$5,000,000)	\$0
10	Motor Control Centers (MCC) Rehabilitation (Design/Construction)	\$400,000	\$110,000	\$510,000
2	Effluent Reuse Pump Station Rehabilitation (Construction)	\$4,100,000	\$650,000	\$4,750,000
9	TWAS Short-Term Improvements (Construction)	\$800,000	(\$800,000)	\$0
1	Dewatering Improvements (Construction)	\$2,000,000	\$0	\$2,000,000
3	Gas Conditioning System Improvements (Design)	\$200,000	\$0	\$200,000
7	Bleach Building HVAC (Construction)	\$500,000	\$600,000	\$1,100,000
N/A	Odor Control Improvements (Pilot and Assistance)	\$500,000	(\$200,000)	\$300,000
4	Digester #4 Membrane Cover (Predesign)	\$150,000	\$50,000	\$200,000
5	Filter Building/UV Disinfection Bypass, Evaluation & Engineering Study		\$250,000	\$250,000
N/A	Fluidized Bed Reactors Evaluation & Expansion Pre-Design		\$450,000	\$450,000
N/A	New Dewatering Building Preliminary Engineering Report		\$450,000	\$450,000
	Total (not including previous FY CIPs)	\$14,241,000	(\$3,440,000)	\$10,801,000
	FY21 Approved =	\$14,244,000		
			Reno Portion (68.63%)	\$7,412,726
			Sparks Portion (31.37%)	\$3,388,274